EXPERT 52

CUTTING PLOTTER

User Manual

`

Great Computer Corporation ©

V.6 2014 Mar

NOTICE

GCC reserves the right to modify the information contained in this user manual at any time without prior notice; un-authorized modification, copying distribution or display is prohibited. All comments, queries or suggestions concerning this manual please consult with your local dealer.

V.6 2014 Mar

Important Information

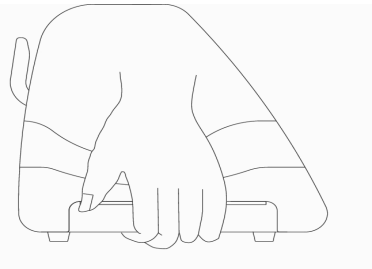
Thank you for purchasing the ***Expert 52 Cutting Plotter.***

Before you use the cutting plotter, please make sure that you have read the safety precautions and instructions below.

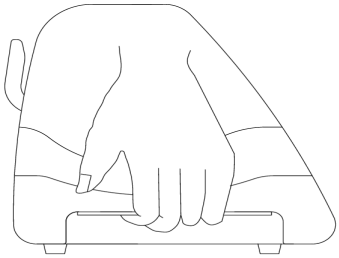
Caution

SAFETY PRECAUTIONS!

- For safety concern, please always hold the cutter firmly **from the bottom** while moving it. Do not move the cutter by clasping the depression area on both sides.



O (correct)



X (Incorrect)

- Do not shake or drop the blade holder, a blade tip can fly out.
- During an operation, do not touch any of the moving parts of this machine (such as the carriage). Also be careful to make sure that clothing and hair do not get caught.
- Always connect the power cable to a grounded outlet.
- Always use the accessory power cable which is provided. Do not wire the power cable so that it becomes bent or caught between objects.
- Do not connect the power cable to branching outlet to which other machines are also connected, or use an extension cable. There is danger of overheating and of mis-operation of the machine.
- Keep the tools away from children where they can reach.
- Always put the pinch rollers within the white marks.

Table of Contents

Important Information

1. General Information

1.1 Package Items 1-1
1.2 Product Features 1-1
1.3 The Appearance 1-2

2. Installation

2.1 Precaution 2-1
2.2 Stand Installation 2-2
2.3 Blade Installation 2-7
2.4 Instruction of Damper Roller 2-9
2.5 Media Loading 2-10
2.6 2.6.1 Loading the Sheet Media 2-10
2.6.2 Loading the Roll Media 2-12
2.6.3 How to Change the Poll Size Without Turning off the Machine? 2-12
2.7 Cable Connections 2-13
2.7.1 USB Interface 2-13
2.7.2 Driver Un-installation 2-16
2.7.3 RS-232 Interface 2-19
2.7.4 Printer Sever Shared Setting 2-19

3.Operation

3.1 The Control Panel 3-1
3.2 VLCD 3-2
3.3 File Uploader 3-5
3.4 Data Transmission 3-6
3.5 Expert 52 Print Driver setting 3-9
3.5.1 Option Page 3-9
3.6 Reference Parameter setting for different materials 3-11

4. Basic Maintenance

4.1 Cleaning the Cutting Plotter 4-1
4.2 Cleaning the Grid Drum 4-1
4.3 Cleaning the Pinch Rollers 4-2

5. Trouble Shooting

5.1 What if Expert 52 cannot Operate? 5-1
5.2 Light Indicators 5-1
5.3 Cutting Quality Problems 5-3

Appendix

A-1 Expert 52 Specification A-1
A-2 Blade Specification A-2
A-3 CorelDRAW Instruction A-3
A-4 DirectCut A-4

1. General Information

1.1 Package Items

The package of Expert 52 contents the items listed below, please check carefully.
If you find any item missing, please consult your local dealer for further assistance.

Item	Quantity
Cutting Plotter	**1 Set**
Accessories	**1 Set**

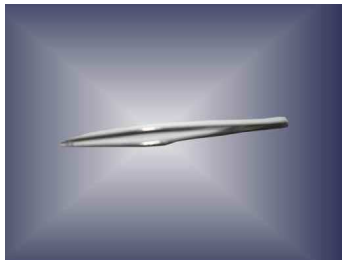
1. Installation CD

2. AC Power Cord

3. Cutting Pad

4. USB Cable (1.8m)

5. Tweezers



6. Paper Slicer

1.2 Product Features

The followings are the main features of the Expert 52 cutting plotters:

- Dual-port connectivity – USB & Serial interface.
- Up to 250 gram cutting force.
- Up to 400 mm/per second cutting speed.
- Guaranty 3 meter (10') tracking.

1.3 The Appearance (EX-52)

1.3.1 The Front View

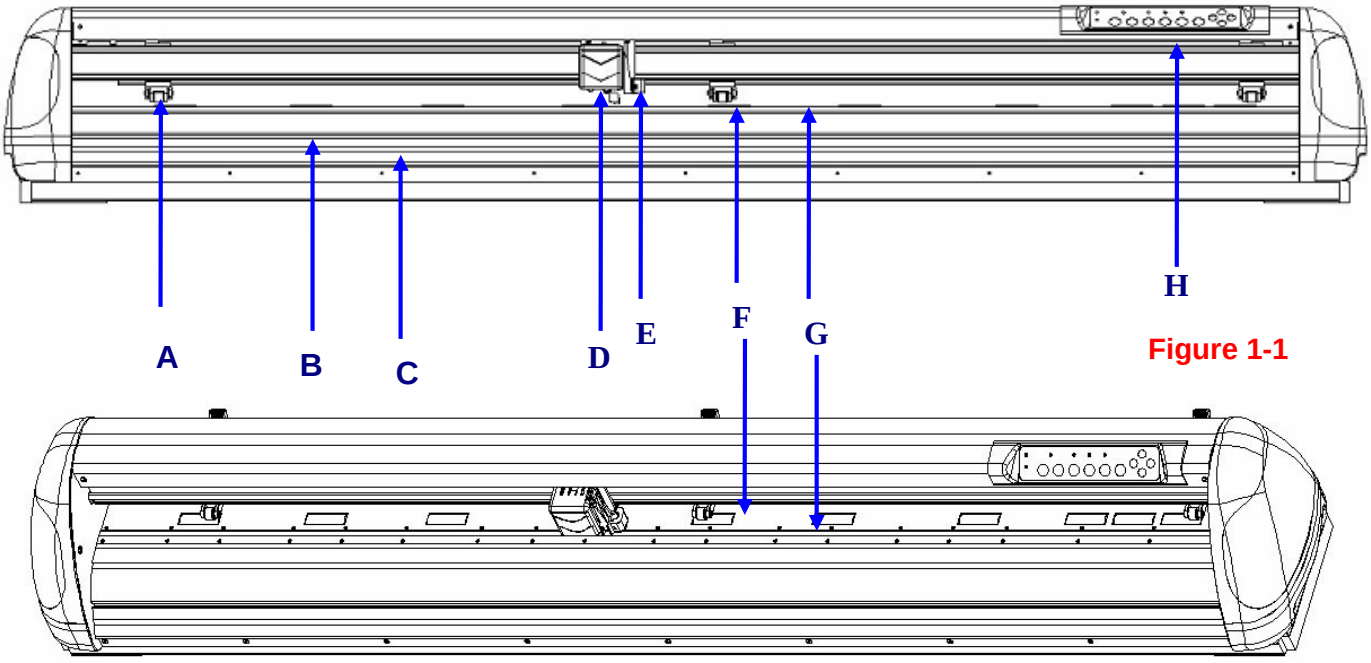
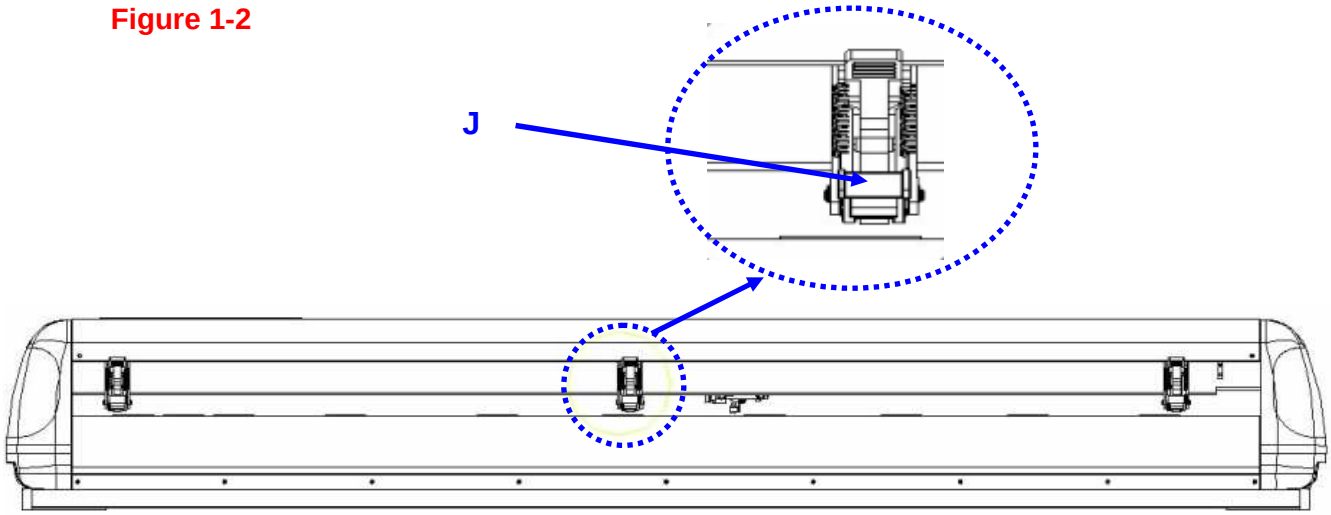


Figure 1-1

Object		Description
A	Primary Pinch Roller	To help hold the media during cutting.
B	Slicing Groove	To help slice off media.
C	Alignment Ruler	To align media with clear guideline marks
D	Tool Carriage	Performs the cutting with the installed blade or pen.
E	Blade Holder	To hold the blade.
F	Platen	The surface for holding and supporting media in operation.
G	Cutting Pad	To protect blade and plate in operation.
H	Control Panel	To consist of 10 control keys and 6 LED lights.
J	Grid Drum	To move media back and forth in operation

Figure 1-2



1.3.2 The Side Views

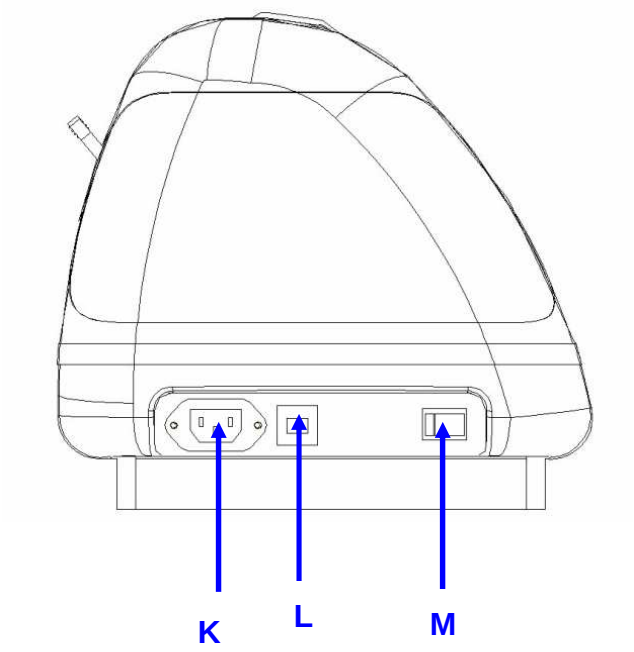


Figure 1-3

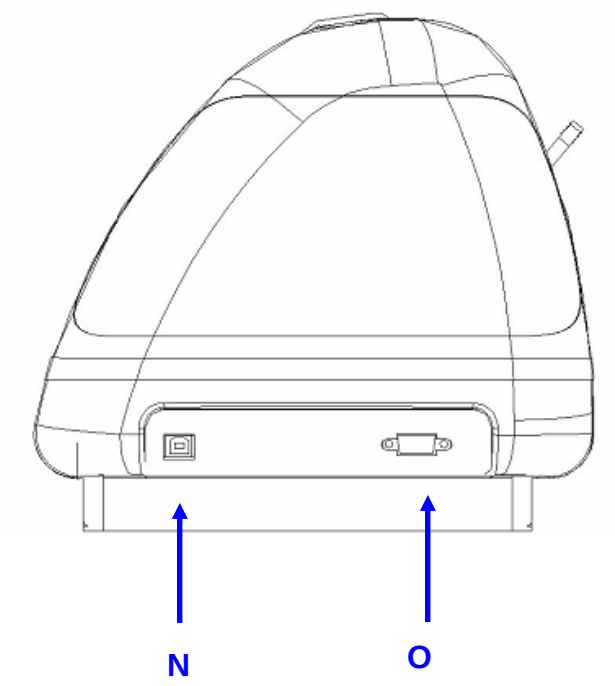


Figure 1-4

Object		Description
K	AC Power Connector	To insert the AC power cord.
L	Fuse	3Amp.
M	Power Switch	To turn on or off the machine.
N	USB Connector	To connect the machine and a computer through a USB cable.
O	Serial Interface Connector	To connect the machine and a computer through a RS-232 cable.

2. Installation

2.1 Precaution

Please read below information carefully before you start installation.

Notice 1

- Make sure the power switch is off before installing the cutting plotter.
- Carefully handle the cutter to prevent any injuries.

Notice 2 Choosing a proper place before setting up the cutting plotter

Before installing your cutting plotter, select a suitable location, which meets the following conditions.

- The machine can be approached easily from any direction.
- Keep enough space for the machine, accessories and supplies.
- Keep the working area stable, avoiding severe vibration.
- Keep the temperature between ***15 and 30 ℃ (60-86°F)*** in the workshop.
- Keep the relative humidity between ***25% and 75%*** in the workshop.
- Protecting the machine from dust and strong air current.
- Preventing the machine from direct sunlight or extremely bright lighting.

Notice 3 Connecting the Power Supply

Check the plug of the power cord to see if it mates with the wall outlet. If not, please contact your dealer.

- Insert the plug (male) into a grounded power outlet.
- Insert the other end (female) of power cord into the AC connector of cutting plotter.

2.2 Stand Installation

Please follow the procedures below for assembling the stand.

Step 1 **Please examine the supplied items in the accessory box of the stand carton before you install:**

- 1 Left side vertical stand
- 1 Right side vertical stand
- 1 Support for left side
- 1 Support for right side
- 1 Stand Beam
- 2 Bottom Stands with wheels
- 2 Sliding brackets for paper take up
- 1 Hex Wrench (M5)Φ4
- 28 Socket flat head screws(M6*12L)
- 1 Installation Guide

Step 2

Position the Left side vertical stand perpendicularly to part ❶and put the screws into the holes and tighten them to form a left side T-stand (Figure 2-1). Repeat the same steps with the Right side vertical stand.

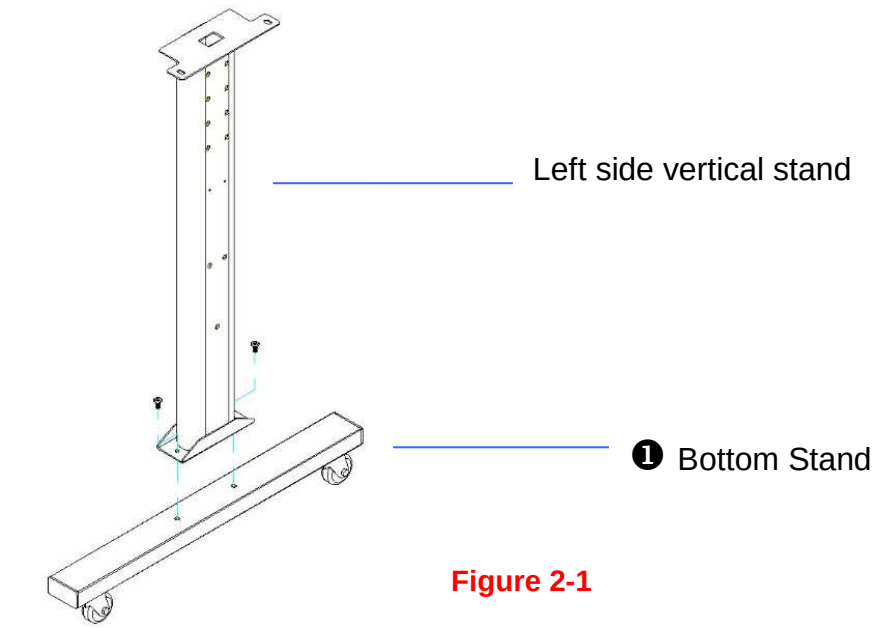


Figure 2-1

Step 3

Place the stand beam upright on the T-stand and put the screws into the holes but do not tighten them at this step.

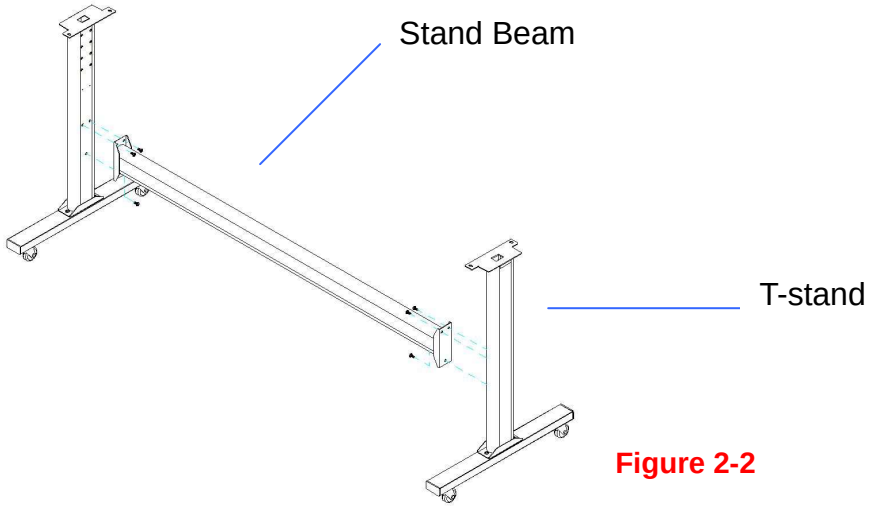


Figure 2-2

Step 4

Remove the cutting plotter from the carton. Position the stand under the plotter, and insert the screws into the holes on the bottom of the plotter and tighten them up as shown in Figure 2-3.

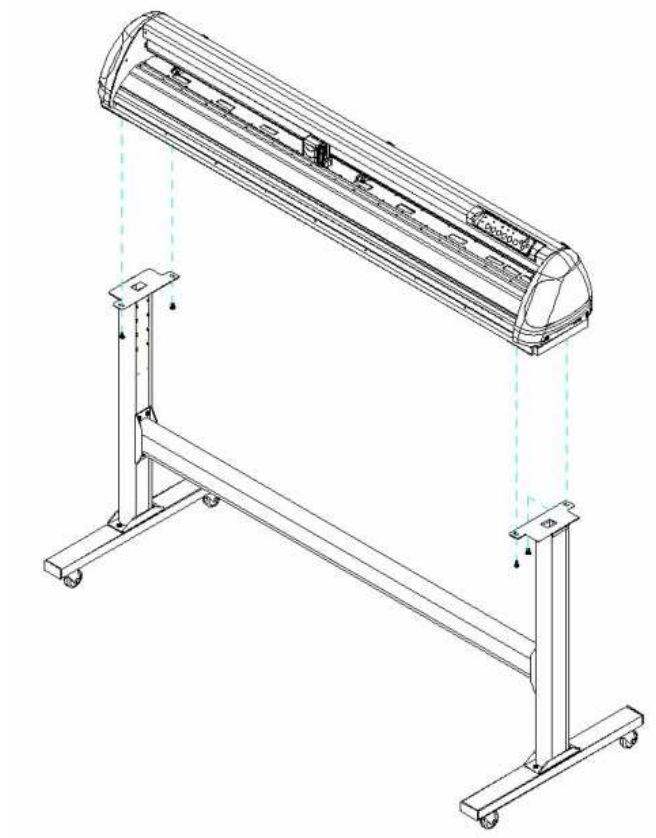


Figure 2-3

Step 5

Insert the roll holder support with the screws into the holes of the stand, and then tighten them up as shown in Figure 2-4. You could decide roll holder support's position by inserting into different holes.

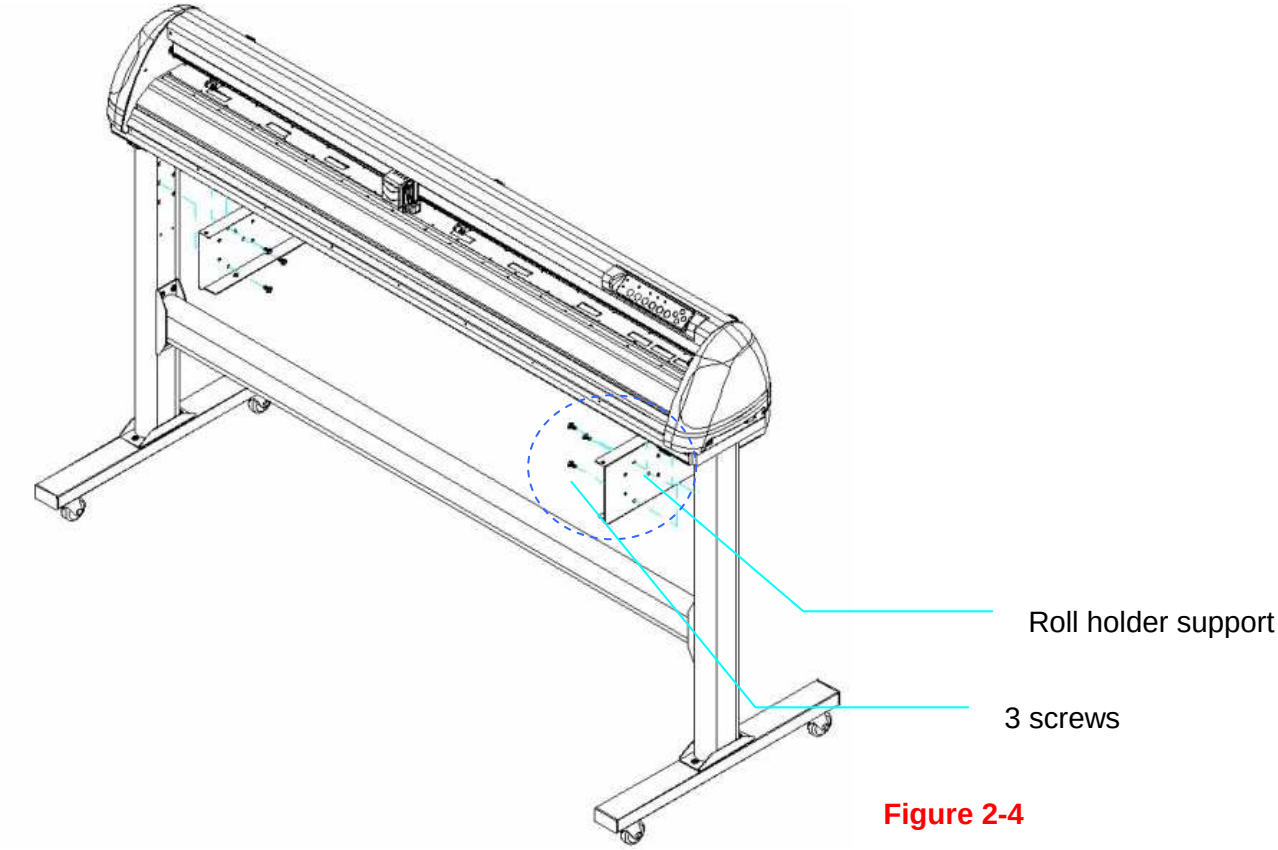


Figure 2-4

Step 6

Place two roll holders onto the roll holder support and ensure the white protrusion is wedged in the groove. (Figure 2-5)

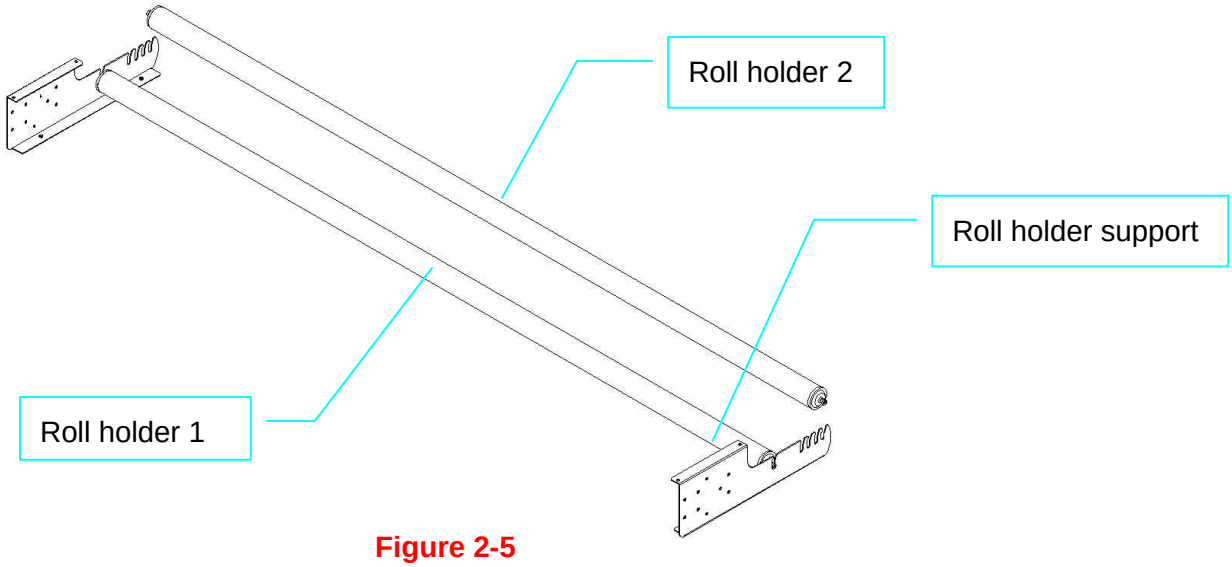


Figure 2-5

Step 7

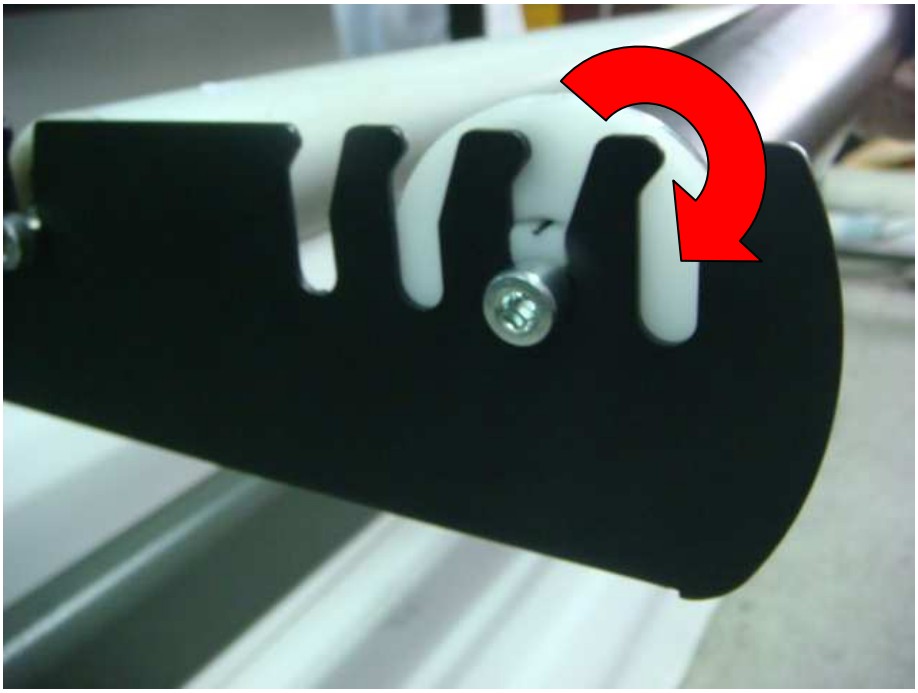
Turn the screw counter-clockwisely for around three times after unpacking roll holder 2

Step 8

Insert the end of the roll holder without the damper into the left roll holder support and then insert the end of the roll holder with the damper into the right roll holder support. Ensure the white protrusion is wedged in the groove.

Step 9

Tighten the screw on the damper until it is securely attached to the right roll holder support.



Step 10

Lastly, the complete picture will be shown like below. (Figure 2-6)

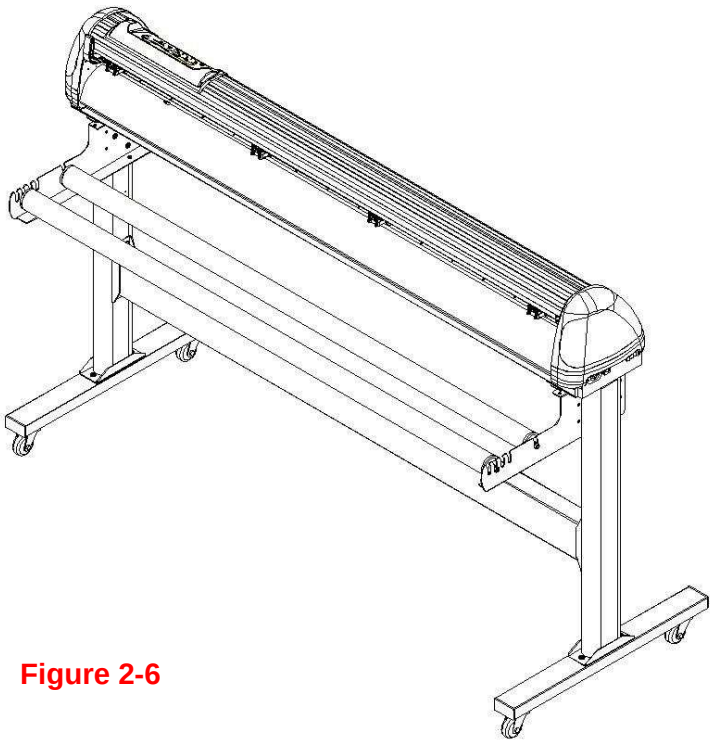


Figure 2-6

2.3 Blade Installation

Figure 2-7 is the illustrator of the blade holder. Insert a blade into the bottom of the blade holder and remove the blade by pushing the pin. Make sure that your fingers are away from the blade tip.

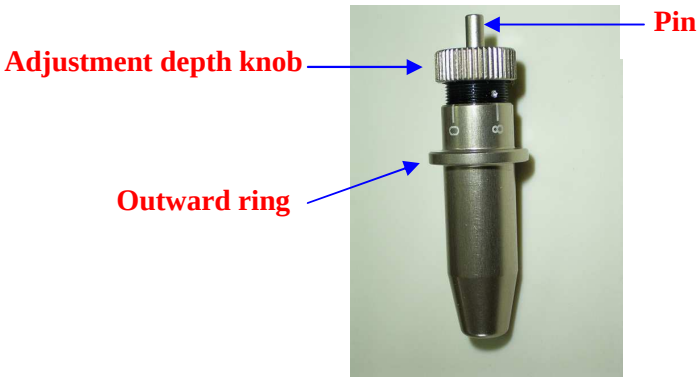


Figure 2-7

Step 1

Install blade (Figure 2-8).

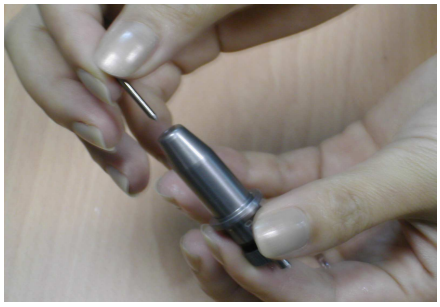


Figure 2-8

Step 2

Push the blade to the bottom of the blade holder (Figure 2-9).

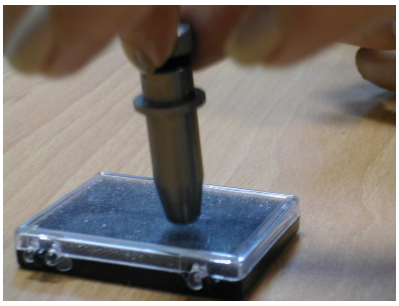


Figure 2-9

Step 3

Adjust the blade tip to suitable length by screwing “Blade tip adjustment screw” clockwise or count-clockwise. (Figure 2-10).

Figure 2-10

Tips:

“The proper length” means the blade’s length is adjusted 0.1mm more than film’s thickness. That is, if the thickness of film is 0.5mm, then blade’s length is properly adjusted 0.6mm and it can completely cut through the film layer yet avoid penetrating the backing.

Step 4

Insert the blade holder into tool carriage. Please note the outward ring of the holder must put into the grooves of carriage firmly (see Figure 2-11), fasten the case (Figure 2-12).

Figure 2-11

Figure 2-12

Step 5

Use the reversing steps to remove the blade holder.

Step 6

Eject the blade: Push **"Blade eject pin"** to eject blade when the blade needs to be replaced.

Caution

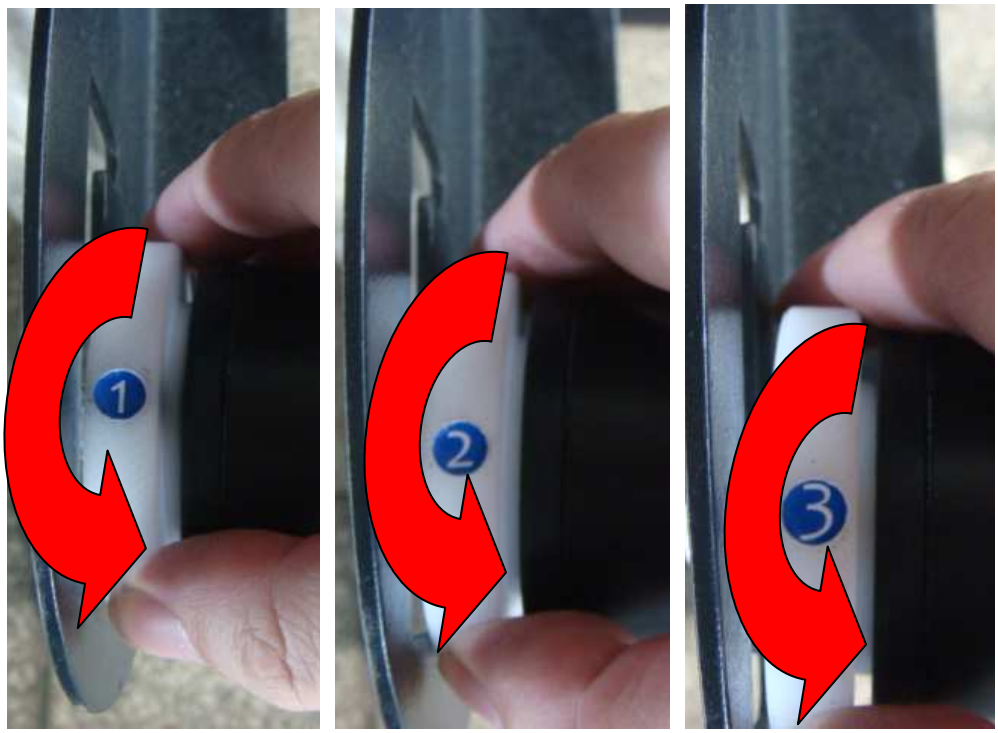
The blade will lose its sharpness after a period of usage, the cutting quality be affected. By increasing the cutting force, it might do the trick. However, the blade is worn out and no longer provides a reliable cutting, you should re a new one. The blade is consumable and must be replaced as often as nece to maintain the cutting quality. The quality of the blade deeply affects c quality. So be sure to use a high quality blade to ensure good cutting results

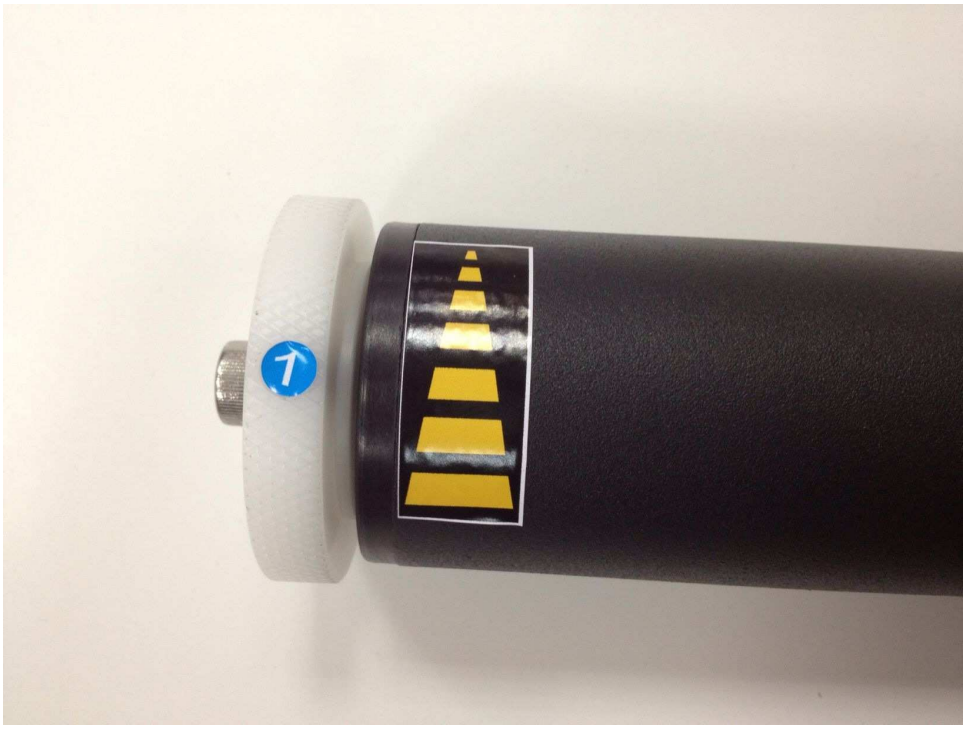
Tips - When to replace a new blade:

- ✓ If the blade is broken, you have to replace a new one.
- ✓ If cutting quality is not as good as usual, you may need to replace a new one.
- ✓ If the material cannot be cut through by higher cutting force, you may need to replace a new one.

2.4 Instruction of Damper Roller

Turn the wheel as instructed below to adjust damping. The bigger the number is, the stronger the damping. The volume symbol sticker indicates the damping level, shown below.





2.5 Media Loading

2.5.1 Loading the Sheet Media

To load the media properly, please follow the procedures below:

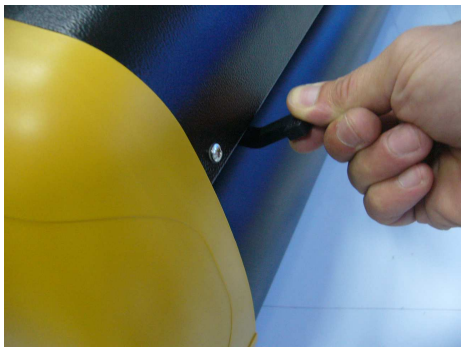


Figure 2-13

Step 1

Lift the 2 levers at the back side of the cutter to lift the pinch rollers (Figure 2-13).

Step 2

Load your media on the platen and slide it under the pinch rollers from either the front side or the backside. The **alignment rulers** on the platen extension will help you to adjust the media precisely (Figure 2-14).

Note: Expert 24 serves as an illustration here.

Figure 2-14

Step 3

Then move the pinch rollers manually to the proper position. Be sure the pinch rollers must be positioned above the grid drum. The **stickers** on the main beam show the position of the grid drums (Figure 2-15).

Figure 2-15

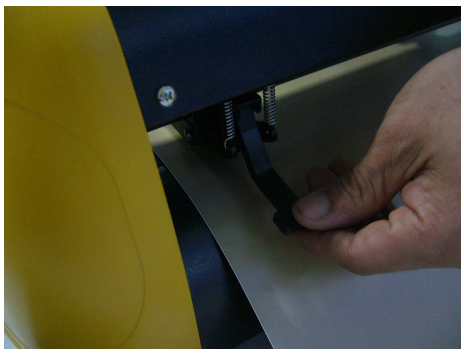


Figure 2-16

CAUTION!!!

- ✓ **Make sure the Primary and secondary pinch rollers are set to right positions.**
- ✓ **Position the Primary Pinch Rollers at the right and left sides of media.**
- ✓ **Position the Secondary Pinch Roller at the center of media.**

Note: Expert 24 serves as an illustrator here.

(O)

Correct

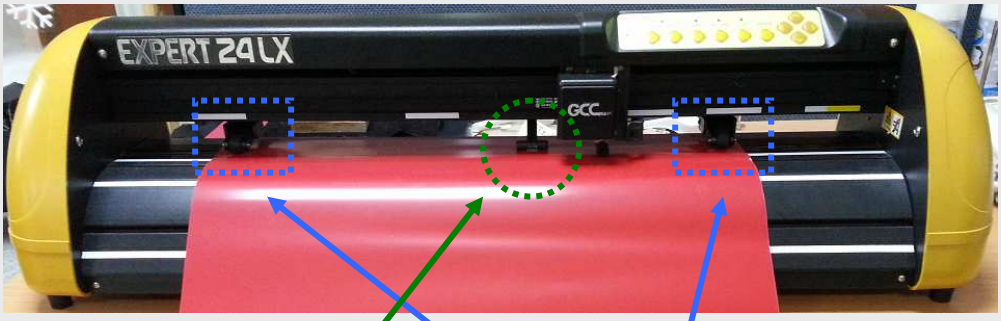


Figure 2-17

(X)

Secondary Pinch Roller **Primary Pinch Roller**

Incorrect

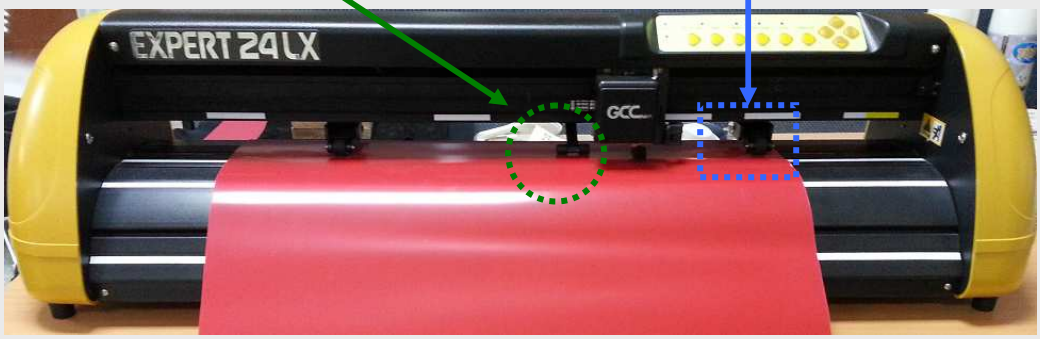


Figure 2-18

Step 4

Push the lever backward to lower down the pinch rollers (Figure 2-16).

Step 5

After turn on the power, the tool carriage will measure the size of the media automatically. And the plotting cutter begins to work.

Note:

- ✓ Always adjust the position with the pinch rollers raised.
- ✓ Please reposition the pinch roller by holding the center of the pinch roller and moving it from the rear end of the machine. (Figure 2-19)
- ✓ DO NOT move the pinch roller by holding its front rubber roller (Figure 2-20).

Figure 2-19

Figure 2-20

(O)

Correct

(X)

Incorrect

2.5.2 Loading the Roll Media

You can use the stand. Please refer to Chapter 2.2 for hardware setup, and Chapter 2.5.1 for media loading.

2.5.3 How to change the poll size without turning off the machine?

Have the machine on-line, press origin set once and the red error light will start blinking, then pressed again and the machine will start moving to get the new size. Then open the VLCD and under the poll size you will find the new measurements.

2.6 Cable Connection

The cutting plotter communicates with a computer through a **USB (Universal Serial Bus) or** a **Serial port (RS-232C)**. This chapter shows you how to connect the cutting plotter to a host computer and how to set up the computer/cutting plotter interconnection.

!! **Notice:** When USB connection is enabled, serial port will be disabled automatically.

2.6.1 USB Interface

Expert 52 build-in USB interface are based on the Universal Serial Bus Specifications Revision 1.1. (Operation system of Windows 95, Windows NT don't support USB).

- USB driver installation

Caution!!

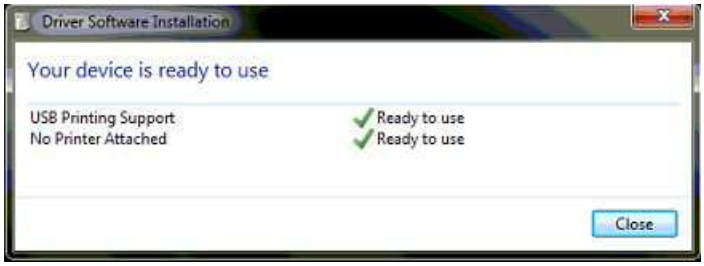
✓ **If you are using Windows 8/ 7/ Vista/ XP/ 2000 as your operating system, make sure you log in using the "Administrator" account.**

Use the USB One-click Installation for quick driver installation. Follow the simple steps below for driver setup.

Step 1:

Connecting your GCC cutter

1. Turn on the machine.
2. Connect the USB connector to the machine and then USB driver will installed automatically. It will take a few minutes to find the device. Please DO NOT disconnect the USB cable until the installation has completed.
3. You can double click the USB icon on the taskbar to make sure the USB device is detected.

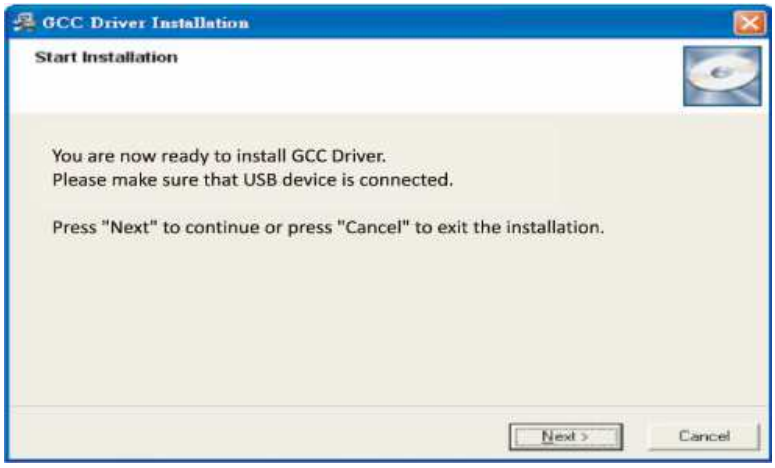


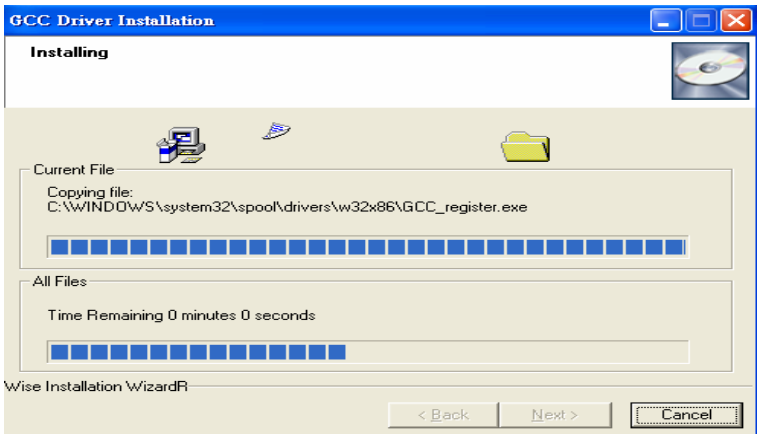
Step 2: Installing the software

(1) Put the installation CD into your CD-ROM. **Please make sure that the USB device is connected before you start the driver installation.**

(2) Choose the model you want to install from the driver list and click on Win 8/ 7/ Vista/ XP Driver (Manual Selection) or Win 8/ 7/ Vista/ XP Driver (Automatic detection) to start installing the Driver and AAS plugin. (The Expert Pro model is used as an illustration in the following steps.)

(3) Click “Next” to start the driver installation.


GCC Driver Installation
Start Installation
You are now ready to install GCC Driver.
Please make sure that USB device is connected.
Press "Next" to continue or press "Cancel" to exit the installation.
Next >
Cancel



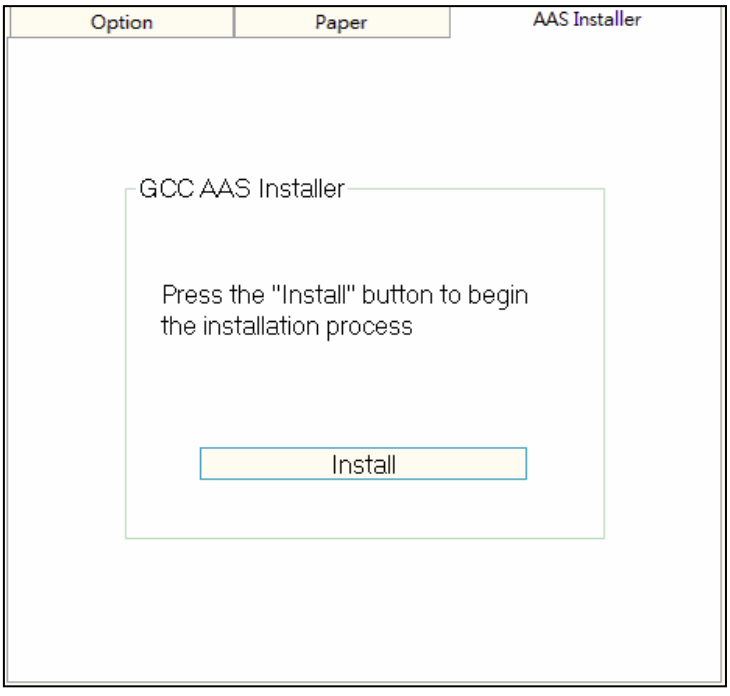
(4) The installation will take a few minutes to complete and you will see a message below and click on “OK” upon completion. Enjoy your GCC cutter!

Note:

(1) If the driver is being installed for a second time, the user will be prompted as to whether a second copy of the driver installation is required.

(2) If the user selects yes, a second copy of the driver will be installed.

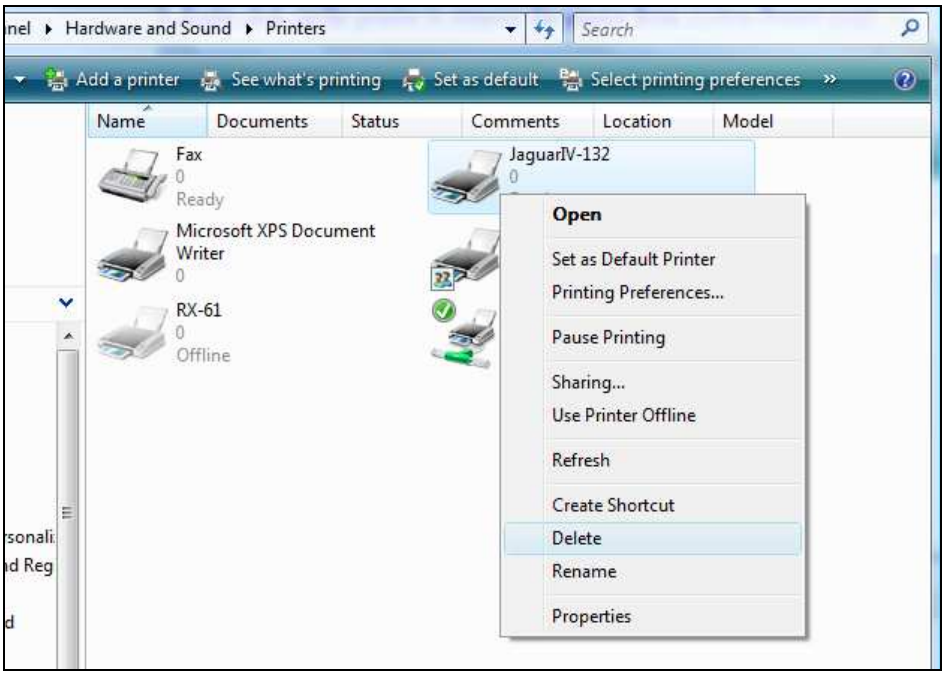
For users who have upgraded Adobe Illustrator or CorelDRAW, please go to the AAS Installer page in the Properties window and click Install to access the latest version of GCC AAS Plugin.

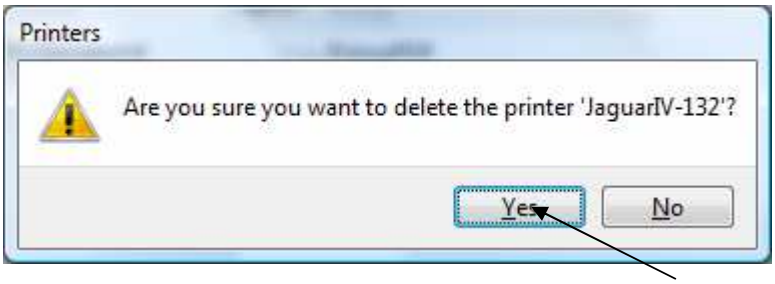


2.6.2 Driver Un-installation

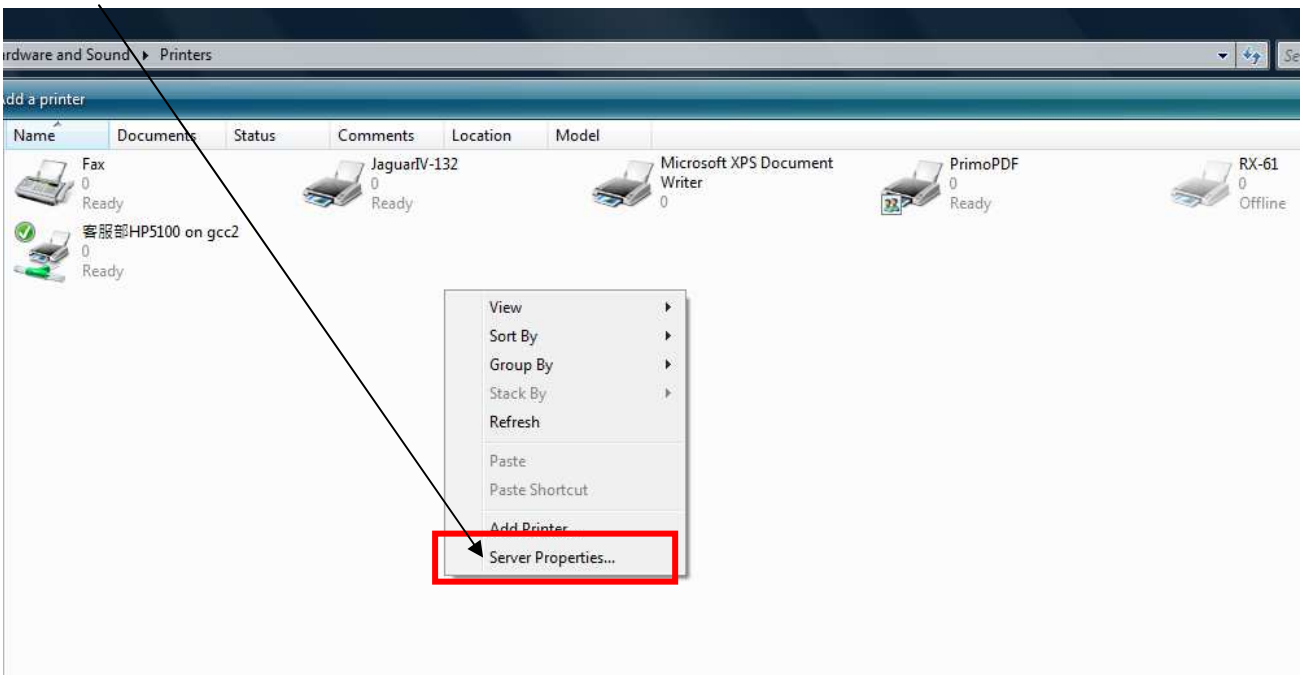
You have to remove previous version driver installed on your PC system completely before you can install the latest version successfully. Please refer to below steps.

1. Right click on the printer to remove the printer from system Printer page.

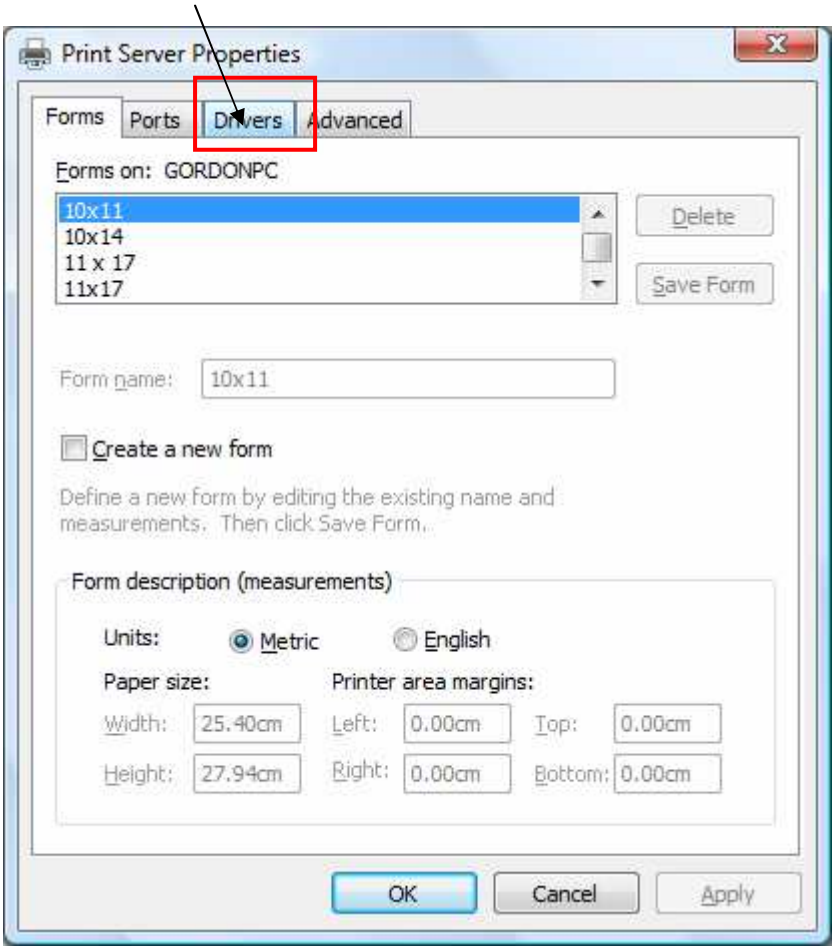


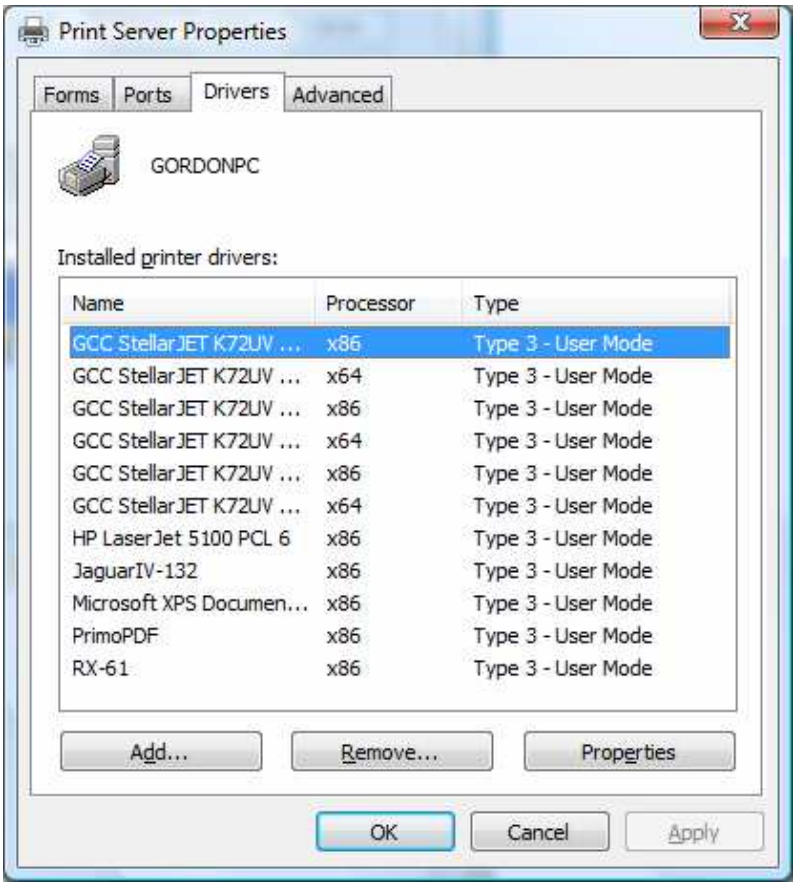


2. After removing the unit, right click on any empty space on the page and select “Server Property”



3. Select “Driver” page

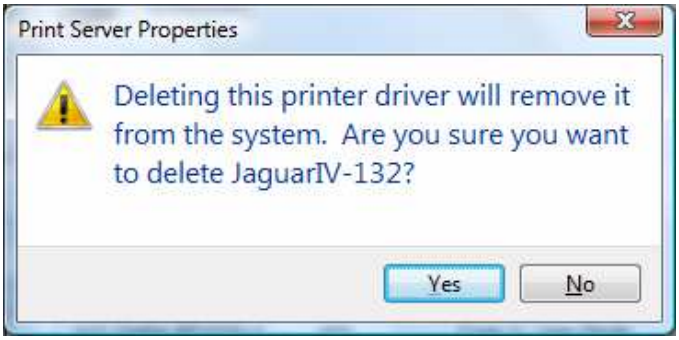




Select the model and click on “Remove”.

Remove Driver And Package
Do you want to remove the driver(s) only, or remove the driver(s) and driver package(s) from your system?
Remove driver only.
Remove driver and driver package.
OK
Cancel

Click on “OK”


Print Server Properties
Deleting this printer driver will remove it from the system. Are you sure you want to delete JaguarIV-132?
Yes
No

Click on “Yes”

The driver installed on PC is completely removed.

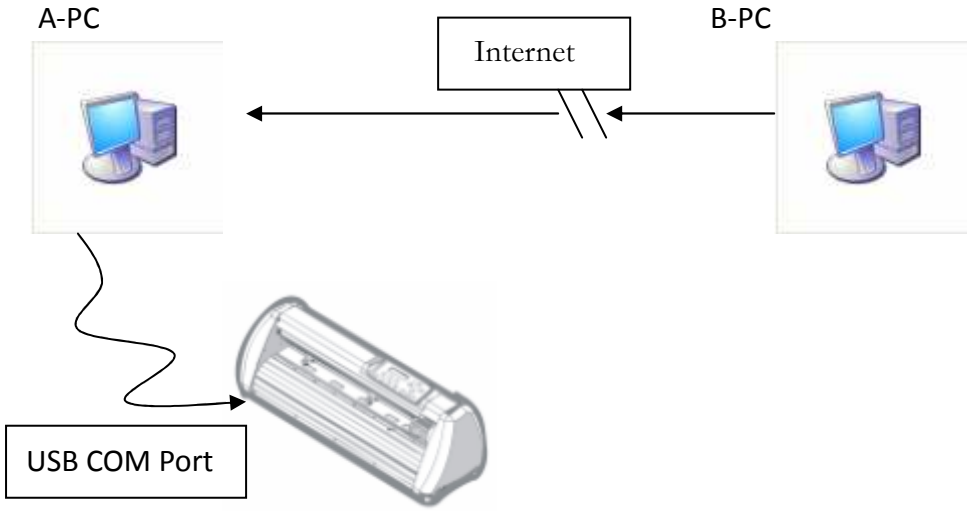
2.6.3 RS-232 Interface

■ Connecting to the RS-232 (Serial) Port

For IBM PC, PS/2 users or compatibles, connect the RS-232C cable to the serial connector of the assigned serial port (COM1 or COM2) of your host computer.

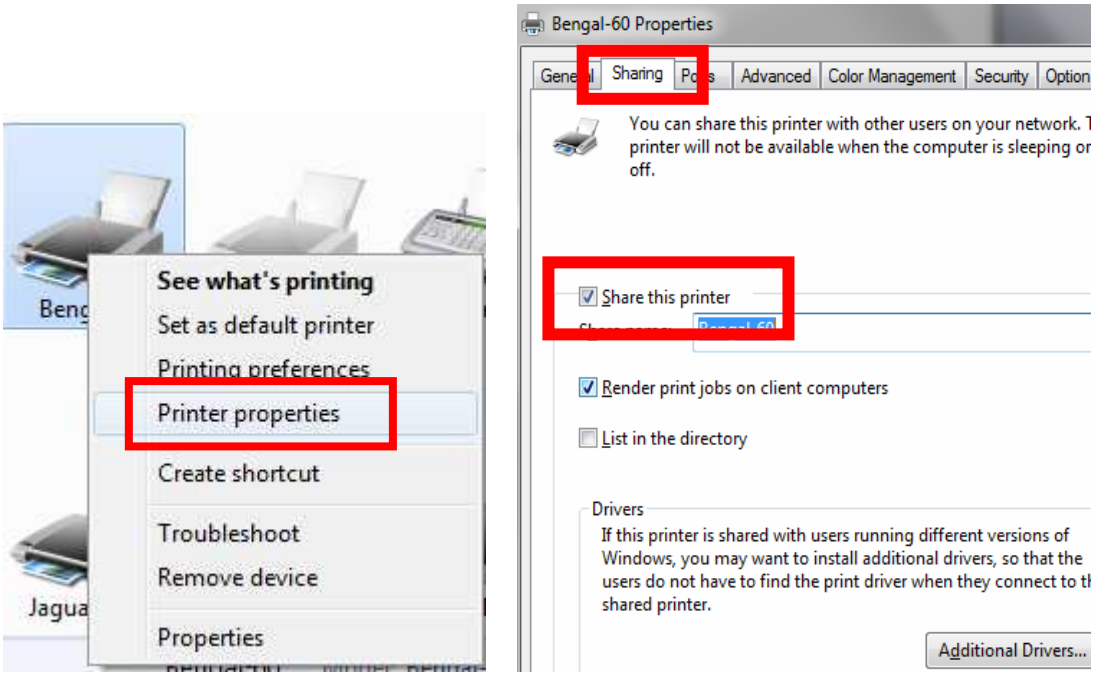
2.6.4 Printer Sever Shared Setting

In “A-PC”, set the printer driver as a shared printer, then use B-PC to connect A-PC’s printer driver via internet.



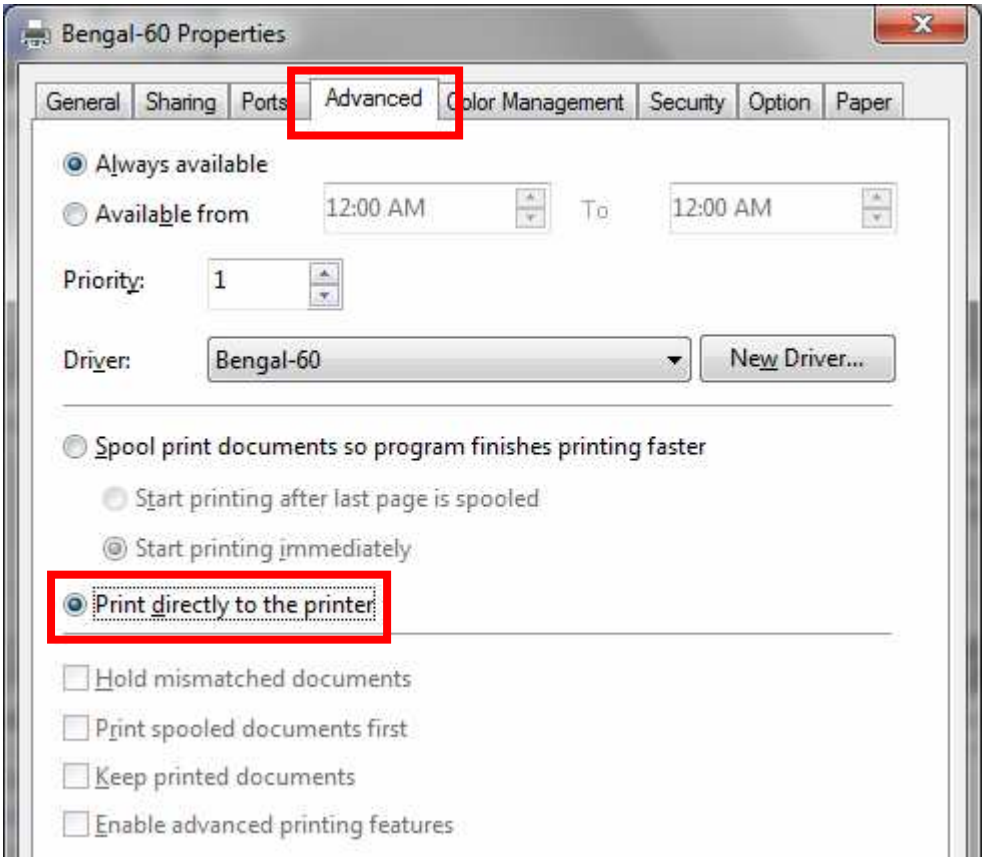
Step 1.

Please set A-PC’s printer driver to shared printer. (Right-click on printer icon, choose “Printer properties”. Click “Sharing” tab then check “Share this printer”)


See what's printing
Set as default printer
Printing preferences
Printer properties
Create shortcut
Troubleshoot
Remove device
Properties
Bengal-60 Properties
Sharing
Advanced
Color Management
Security
You can share this printer with other users on your network.
printer will not be available when the computer is sleeping or
off.
Share this printer
Render print jobs on client computers
List in the directory
Drivers
If this printer is shared with users running different versions of
Windows, you may want to install additional drivers, so that the
users do not have to find the print driver when they connect to
shared printer.
Additional Drivers...

Step 2.

Click “Advanced” tab, then choose “Print directly to the printer” option.



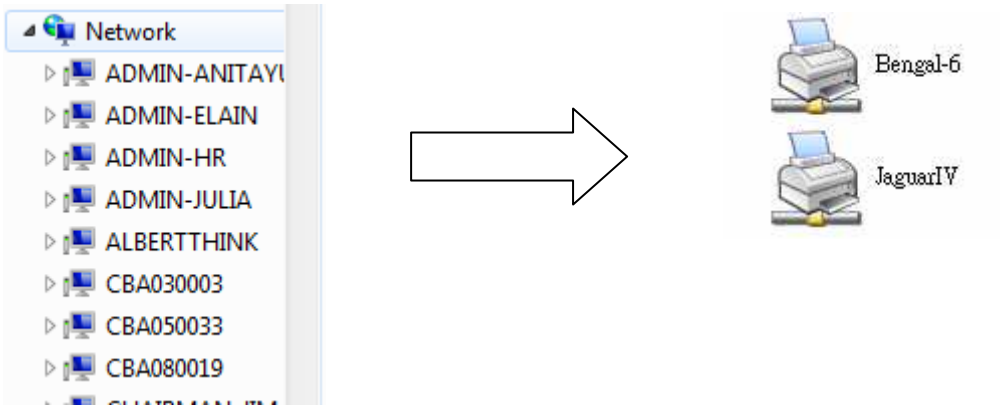
Step 3.

Send a job to the machine to check if A-PC is connected to the machine.

Try to send a job to check if the port is working.

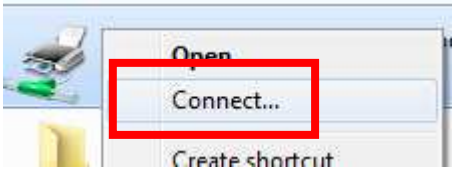
Step 4.

Activate A-PC's Printer Driver from B-PC's Network.



Step 5.

Right-click on printer icon, and select "Connect" to connect A-PC's printer.



3. Operation

3.1 The Control Panel

3.1.1 The Outline of control panel

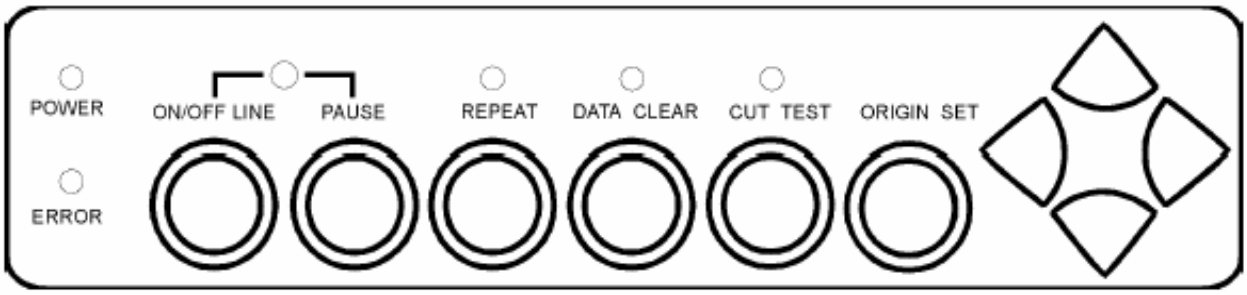


Figure 3-1

Key	Function
POWER LED	To indicate the power status (light up: power on; light off: power off)
ERROR LED	To indicate the error status (light up: error; light off: normal)
ON/OFF LINE	To switch modes or stop cutting job(light up: on-line; light off: off-line) While in on-line mode: only ON/OFF LINE and PAUSE keys activated While in off-line mode: the settings in VLCD can be adjusted.
PAUSE	To temporarily halt cutting process or to continue
REPEAT	To repeat last job.
DATA CLEAR	To clear up buffer memory.
CUT TEST	To perform cutting tests on different media.
ORIGIN SET	To reset origin at a new position.
4 Arrow Keys	To move carriage position, select function, or change setting.

Please note that Expert 24 LX serves as an illustration in the VLCD dialogues in this chapter.

3.1.2 Reset Origin

Note:

✓ Make sure the machine is in off-line mode to enable this function.

Step 1 Move the carriage to a new position.

Step 2 Press the ORIGIN SET button to reset origin.

3.1.3 Cut Test

> **Note:**
> ✓ Make sure the machine is in off-line mode to enable this function.
> ✓ It's recommended to keep performing this function until the cutting quality meets your demand before executing the cutting job.

Step 1 After sizing, press the ON/OFF LINE button to set as off-line mode.

Step 2 Move the carriage to a preferred position.

Step 3 Press CUT TEST button to perform.

3.1.4 Repeat

> **Note:**
> ✓ Make sure the machine is in off-line mode to enable this function.

Step 1 Press the ON/OFF LINE button to set as off-line mode.

Step 2 Press the REPEAT button to perform re-plot function starting at the position where the carriage locates. It is also available to move carriage to a preferred position, re-set origin, and then perform this function.

3.2 VLCD

"VLCD" is a computer program to help modify parameters of cutting functions.

3.2.1 Installation

Step 1 Copy the VLCD.exe file in the Accessories folder of the Expert 52 Installation CD onto your local drive to finish installation.

Step 2 Launch VLCD by double-click on the icon.

> **Note:**
> ✓ Make sure the machine is in on-line mode to enable this program.
> ✓ There is media in the machine.

Step 3 Choose the right port connected to your computer (Figure 3-2).

If you are using the USB cable, choose **USB0** from the pull down menu. If you are using a Serial cable, choose either **COM1** or **COM2**. Make sure no other devices are occupying the port that you are going to use.

> **Note:**
> ✓ Expert 24 LX serves as an illustration in the steps below.

Step 4 Press the **Connect** button to connect your computer and the cutter. If the connection succeeds, the model info, firmware version, and adjustable parameter columns will be showing (Figure 3-3).

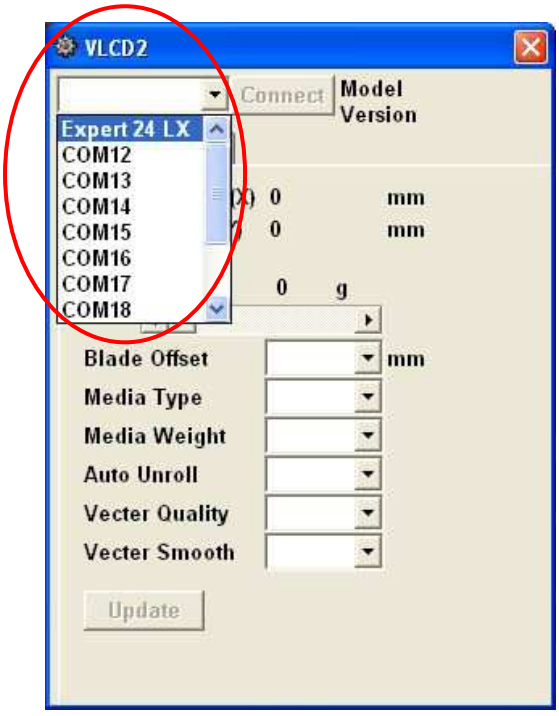


Figure 3-2

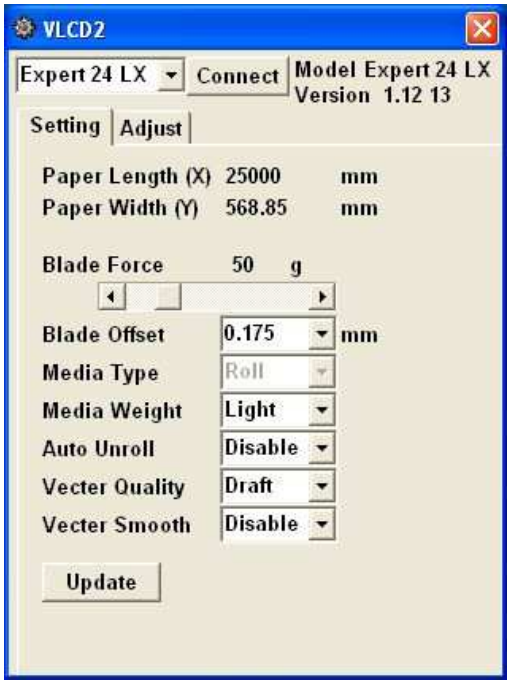


Figure 3-3

3.2.2 Functions of VLCD

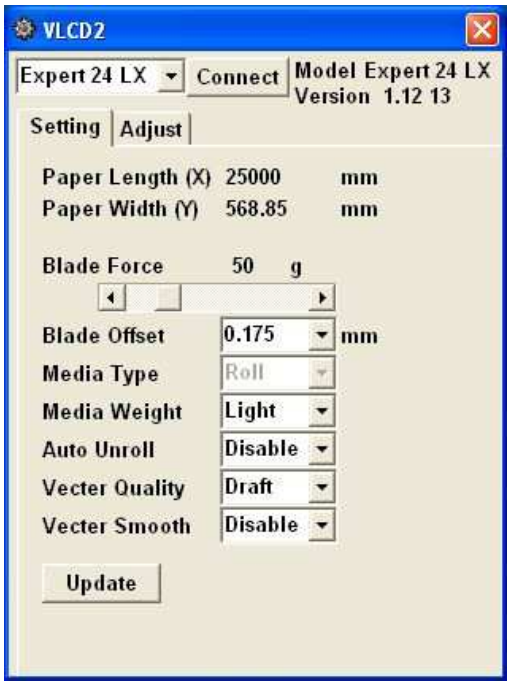
Below are the functions adjustable in VLCD for Expert 52.

- Poll Size
- Force
- Media Weight
- Offset

- Auto Unroll
- Update Setting

Poll Size

Click on the **Poll Size** button will reveal the X/Y values.



In the case, the maximum plotting length is 25000mm, and the distance between the farthest two pinch rollers is 568.85mm (Figure 3-4).

Figure 3-4

Force

To adjust the blade force between 0 and 250 (Default = 50).

Media Weight

To choose different weights of media in two options: Heavy, and Light (Default).

Offset

To adjust the blade offset to ensure cutting quality in 8 options: 0.000, 0.175, 0.250 (Default), 0.275, 0.300, 0.500, 0.750, and 1.000.

Auto Unroll

To switch options for sheet media and roll media (Auto Unroll On: Default).

Update Setting

To apply the changed setting onto the cutter by presses the **Update Setting** button.

3.2.3
Restore factory default settings

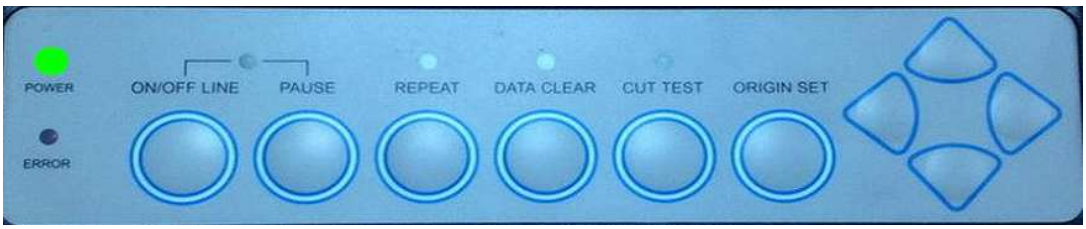
VLCD allows you to turn all parameters to factory-default settings.

Step 1 Enter the USB-port switching mode by pressing “Pause”(2) after “On/Off line”(1) and then press “Origin Set” (3).

Step 2 Press the left key (4) and then up (5)

Step 3 You have now entered the Data clear and restoring default settings mode; press “Data clear” (6) and then “Origin Set” (7) to confirm.

Step 4 The default settings restoring process has been completed. All buttons will be ineffective before the cutter is rebooted.



Step 5 Restart your cutting plotter now.

3.3 File Uploader

3.3.1 Installation

- ✓ “File Uploader” is a tool to help loading files for direct output.
- ✓ The program **ONLY** supports HPGL format-files generated via GCC Cutter driver.
- ✓ Copy the GCC File Uploader.exe file in the Accessories folder of the Expert 52’s Installation CD onto your local drive to finish installation.
- ✓ Launch GCC File Uploader by double-click on the icon (Figure 3-5).

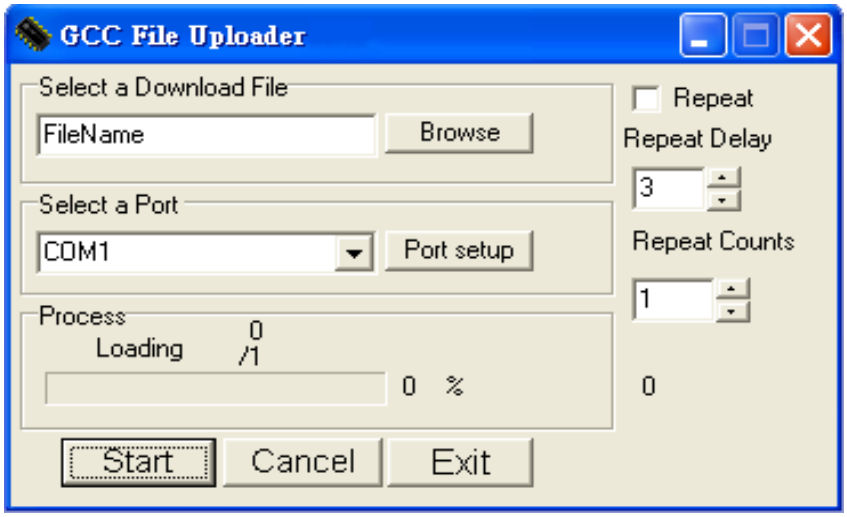


Figure 3-5

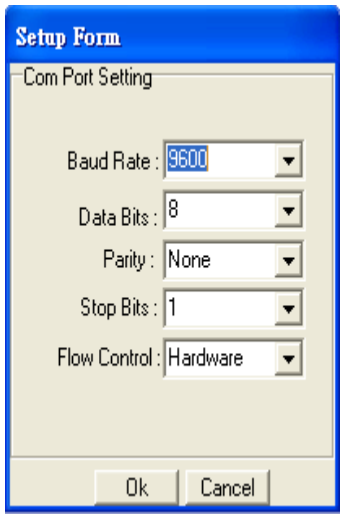


Figure 3-6

3.3.2 Functions of File Uploader

- ■ **Port setup**
  - ✓ This function will be activated while choosing COM port for data transmission.
  - ✓ Press the Port setup button to pop up the setup window for parameter change (Figure 3-6).

- ■ **Repeat**
  - ✓ Activate this function by click on the Repeat’s checkbox.
  - ✓ Repeat Delay – the pause time between jobs; Unit: second.
  - ✓ Repeat Counts – the number of repeat jobs.

3.4 Data Transmission

There are two options to transmit the data from the computer to the cutting plotter:

Option 1: With proper interface settings, the data can be transmitted from your application software package to the cutting plotters directly.

Option 2: Most cutting software packages are able to emulate **HPGL** or **HPGL/2** commands, therefore. As long as the file is **HPGL** or **HPGL/2** format, the cutting plotter can output the data precisely.

3.5 Expert 52 Print Driver setting

3.5.1 Expert 52 Print Driver setting>Option Page

File Function:

The file function section allows users to set the parameters of Speed, Force, Offset and Quality for later use. This section is useful when performing repeated jobs on a variety of objects, allowing you to save your frequently used cutter parameters and load them in the future.

- Custom Media: This section lists the files for the parameter settings that you have recently created and worked. You can save more than 50 files to simplify your cutting job.

- Default: This section contains the reference settings that are applicable with the verified materials to achieve the best cutting results. Please note that the setting value might need to be adjusted according to different suppliers of materials.

- SAVE: This function will save current print driver parameter settings to a file under the specified location on your computer. (Saved parameter setting files will be tagged with the Expert 52 series extension)

- LOAD: This function allows you to load previously saved print driver parameters.

- ORIGINAL: This function will load the print driver's original factory parameter settings.

- SAVE TO DEFAULT: This function allows you to save your current print driver parameters as the default startup settings.

- DELETE: This function will delete the file you select from the Custom Media section, whereas the settings in Default section cannot be deleted. Please note the delete function only removes the list shown in Custom Media section, it does not remove the file from your hard drive, if you wish to completely remove the file from your hard disk, you will have to manually delete the file from your operating system.

Die Cut

The Die Cut function must be activated with the Kiss Cut function to avoid the falling of cut-through materials and material jam beneath the carriage. Die Cut helps you to cut through the backing of the material while Kiss Cut cuts through only the top layer but not the backing. This will leave only tiny bits of the backing attached to the top layer, creating complete individual patterns with backing sheets (see figure 3-7 and 3-8).

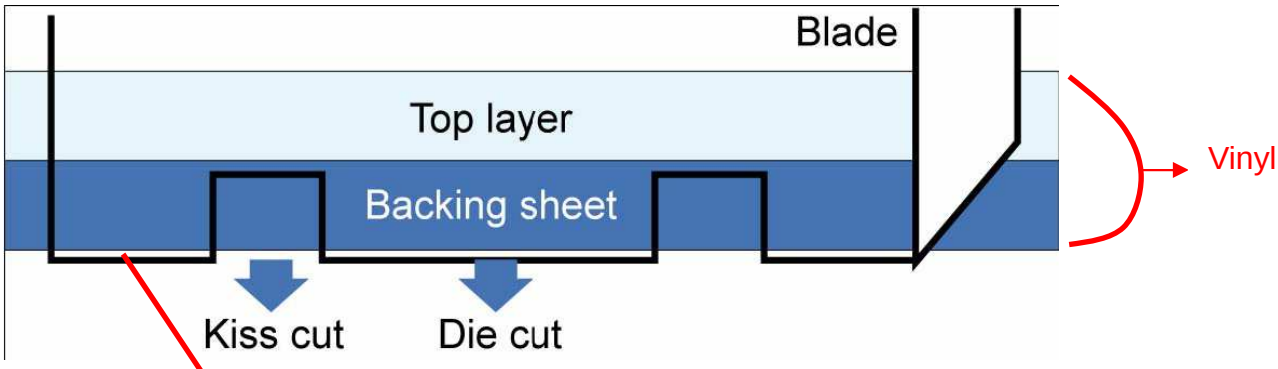


Figure 3-7

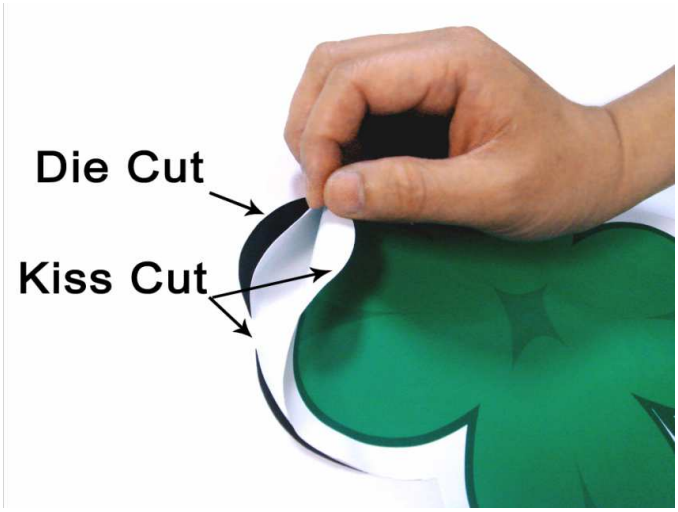
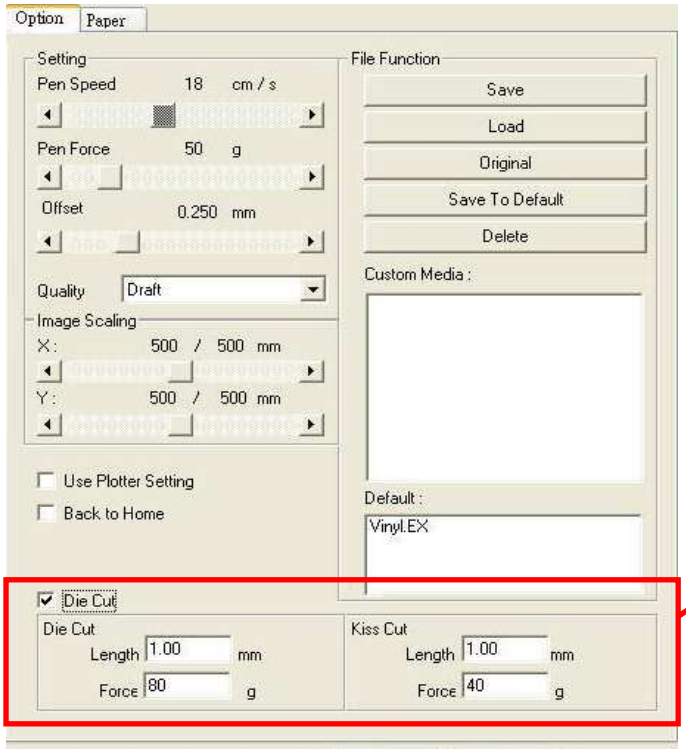


Figure 3-8

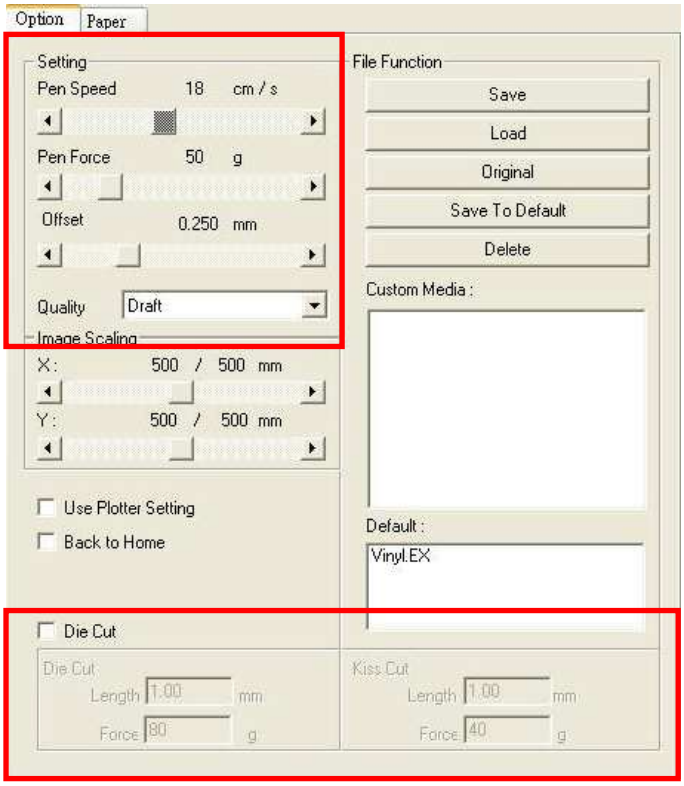
To activate the Die Cut function, go to “Option”, tick “Die Cut”, and enter the amount you wish for the “Length” and “Force” of both Die Cut and Kiss Cut, then click “OK” (see figure 3-9).



*Note:
The length setting for the cutting line of Die Cut is in the range of 0-2000mm whereas that of Kiss Cut is 0-100mm.

Figure 3.9

When the job is completed and you untick the Die Cut function, you will be able to adjust the pen speed, pen force, and offset in the section on the top following normal operating procedures (see figure 3-10).



Note:
1. The extension of the blade has to be set to cut through both the top layer and the backing in the very beginning. You then adjust the tool force for the best cutting performance.
2. Once the Die Cut function is activated, it will perform on all the line segments on the object.

Figure 3-10

3.6 Reference Parameter setting for different materials

The following reference parameter is used on GCC verified materials shown in the table.

Material	Wall stickers	Magnets	Protective tint	
Blade	red	green	green	
Blade tip length (mm)	0.3	0.8	0.3	
Force (g)	95	580	320	
Speed (cm/sec)	72	3	3	
Offset (mm)	0.275	0.5	0.5	
Recommend model	RX, Jaguar	RX, Jaguar	RX, Jaguar, Puma, Bengal, Sable, Ex Pro, Ex 24/52, Ex 24/52 LX	
Material	Vehicle stickers	Reflective film	Cardboard	
Blade	red	green	green	
Blade tip length (mm)	0.27	0.5	0.3	
Force (g)	85	380	165	
Speed (cm/sec)	60	3	30	
Offset (mm)	0.275	0.5	0.5	
Recommend model	RX, Jaguar, Puma, Bengal, Sable, Ex Pro, Ex 24/52, Ex 24/52 LX	RX, Jaguar, Puma, Bengal, Sable, Ex Pro, Ex 24/52, Ex 24/52 LX	RX, Jaguar, Puma, Bengal, Sable, Ex Pro, Ex 24/52, Ex 24/52 LX	
Material	Window tint	Window decoration	Personalized stickers	Rhinestone
Blade	red	red	red	green
Blade tip length (mm)	0.09	0.25	0.28	0.8
Force (g)	70	95	105	190
Speed (cm/sec)	72	65	72	15
Offset (mm)	0.275	0.275	0.275	0.5
Recommend model	RX, Jaguar	RX, Jaguar	RX, Jaguar	RX, Jaguar IV, Puma III

4. Basic Maintenance

This chapter explains the basic maintenance (i.e. cleaning the cutting plotter) required for the cutting plotter. Except 52 for the steps mentioned below, all the other maintenances must be performed by a qualified service technician.

4.1 Cleaning the cutting plotter

In order to keep the cutting plotter under good conditions and have the best performance, you need to clean the machine properly and regularly.

Precaution in Cleaning

- ✧ **Unplug the cutting plotter before cleaning.**
- ✧ **Never use solvents, abrasive cleaners or strong detergents for cleaning. They may damage the surface of the cutting plotter and the moving parts.**

Recommended Methods

- ❖ Gently wipe the cutting plotter surface with a lint-free cloth. If necessary, clean it with a water-rinsed or an alcohol-rinsed cloth. Wipe the cutting plotter to remove any residues on the cutting plotter. Finally absorb water with a soft, lint-free cloth.
- ❖ Wipe all the dust and dirt from the tool carriage rail.
- ❖ Use a vacuum cleaner to clean any accumulated dirt and media residue beneath the pinch roller housing.
- ❖ Clean the platen, paper sensors and the pinch rollers with a water-rinsed cloth or alcohol-rinsed cloth. Finally absorb water with a soft, lint-free cloth.
- ❖ Use the same method mentioned above to clean dust and dirt from the stand.

4.2 Cleaning the Grid Drum

- ❖ Turn off the cutting plotter, and move the tool carriage away from the area needed to be cleaned.
- ❖ Raise the pinch rollers and move them away from the grid drum for cleaning.
- ❖ Use a bristle (a toothbrush is also acceptable) to remove dust from the drum surface. It needs to rotate the drum manually to clean the drum completely (Figure 4-1).

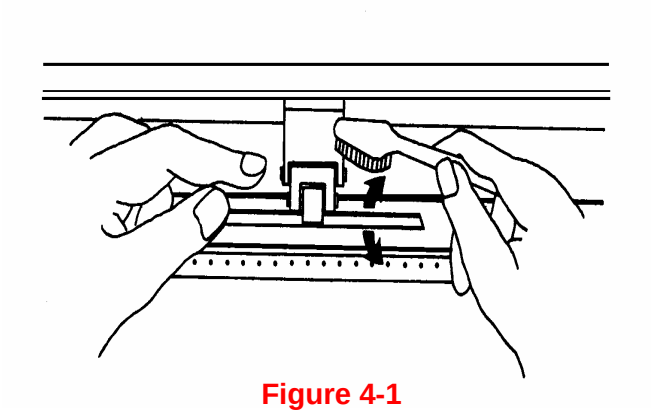


Figure 4-1

4.3 Cleaning the Pinch Rollers

If the pinch rollers need a thorough cleaning, use a lint-free cloth or cotton swab to wipe away the accumulated dust from the rubber portion of the pinch rollers. To prevent the pinch rollers from rotating while cleaning, use your fingers to hold the pinch rollers in place.

Use a lint-free cloth or cotton swab rinsed with alcohol to remove the embedded or persistent dust.

5. Trouble Shooting

This chapter helps you to correct some common problems you may come across. Prior to getting into the details of this chapter, please be sure that your application environment is compatible with the cutting plotter.

Note:
Before contacting your local dealer, please make sure that the problems are coming from your cutting plotter, not from the communication between the computer and cutting plotter or from a malfunction in your computer or software.

Why doesn't the cutting plotter operate?

5.1 What if Expert 52 cannot operate?

If your cutting plotter doesn't plot, please check the following items first:

Is the power cord plugged in properly?
Is the power cord connected to the power connector properly?
Is the power switch turned on properly?

Solutions: If the POWER LED lights on, the cutting plotter should be in a normal condition.
Turn off the cutting plotter and turn it on again to see if the problem still exists.
If the POWER LED doesn't light, please call your local dealer to resolve this problem.

5.2 Light Indicators

Some of the operating problems can be identified by the lights on the control panel.
When your cutting plotter stops operating or the lights are on or flashing unexpectedly, see the following descriptions of the panel light patterns and the actions you should take.

5.2.1 Warning Indicators

When the ERROR LED flashes (as shown below), take the necessary actions according to the following instructions. When the problems are solved, the ERROR LED will turn off automatically. Pressing the ON/OFF LINE button can also turn off the ERROR LED.

Warning Indicators		ERROR	ON/OFF LINE	REPEAT	DATA CLEAR	CUT TEST
1	Graph was clipped	☼	●	●	○	○
2	HPGL/2 command Error	☼	●	○	●	○
3	Lever up or no media	☼	●	○	○	○
4	Cannot repeat	☼	○	●	○	○
5	Communication error	☼	○	○	●	○
6	Width sensor error	☼	○	○	○	●
7	Check media, drum or X motor	●	○	○	●	○

☼ = flash ● = on ○ = off

Warning 1 The graph is clipped

This condition indicates that the cutting graph is bigger than the cutting area.

You can solve the problem by:

1. Reload a wider or longer media.
2. Move the pinch rollers to widen the cutting area.
3. Re-scale the graph to a smaller size. Then send the cutting job again from your computer to the cutting plotter.

Warning 2 HPGL/2 command error

If the cutting plotter cannot recognize the commands from your computer, please check the commands applied to your cutting plotter in the HP-GL/2 or HPGL commands. Then send the same job to the cutting plotter again.

If that doesn't solve the problem, please contact your local dealer.

Warning 3 Lever up or no media

Check that you have lowered the lever down and make sure that you load the media before cutting.

Warning 4 Cannot repeat cutting

There are two possibilities:

1. There is no data in the buffer: please send the job again from your computer;
2. The buffer is full: please send the same job from your computer again.

Under both conditions, press the ON/OFF LINE key to clear the warning message.

Warning 5 Communication error

Check that the serial/USB cable has been connected to the cutting plotter and computer properly.

If so, then check whether the interface settings are correct. Check that the communication settings in your PC are the same as the ones on your cutting plotter (for example – 9600bps, no parity, 8 bits, 1 stop bit). Then, press ON/OFF Line key to switch back to On Line mode.

Warning 6 Width sensor error

Check that the pinch rollers are positioned above the grid drum and reload the media again.

> **Note:**
> In order to identify the warning messages easily, please stick the warning sticker (in accessory box) on the side cover of your cutting plotter.

5.2.2 Error Indicators

If some mechanical problems occur during the operation, the ERROR LED will turn on. Please follow the instructions below to solve the problem. If the cutting plotter still cannot work, please contact your local dealer and tell him or her about the error indicator.

	Error Indicators	ERROR	ON/OFF LINE	REPEAT	DATA CLEAR	CUT TEST
1	SRAM error	●	●	○	○	○
2	DRAM error	●	○	●	○	○
3	Check media, drum, or X motor	●	○	○	●	○
4	Check media or Y motor	●	○	○	○	●

☼ = flash ● = on ○ = off

Error 1 and 2

Please contact your local dealer to replace SRAM or DRAM.

Error 3 Check the media, drum or X-motor (Drum driven motor)

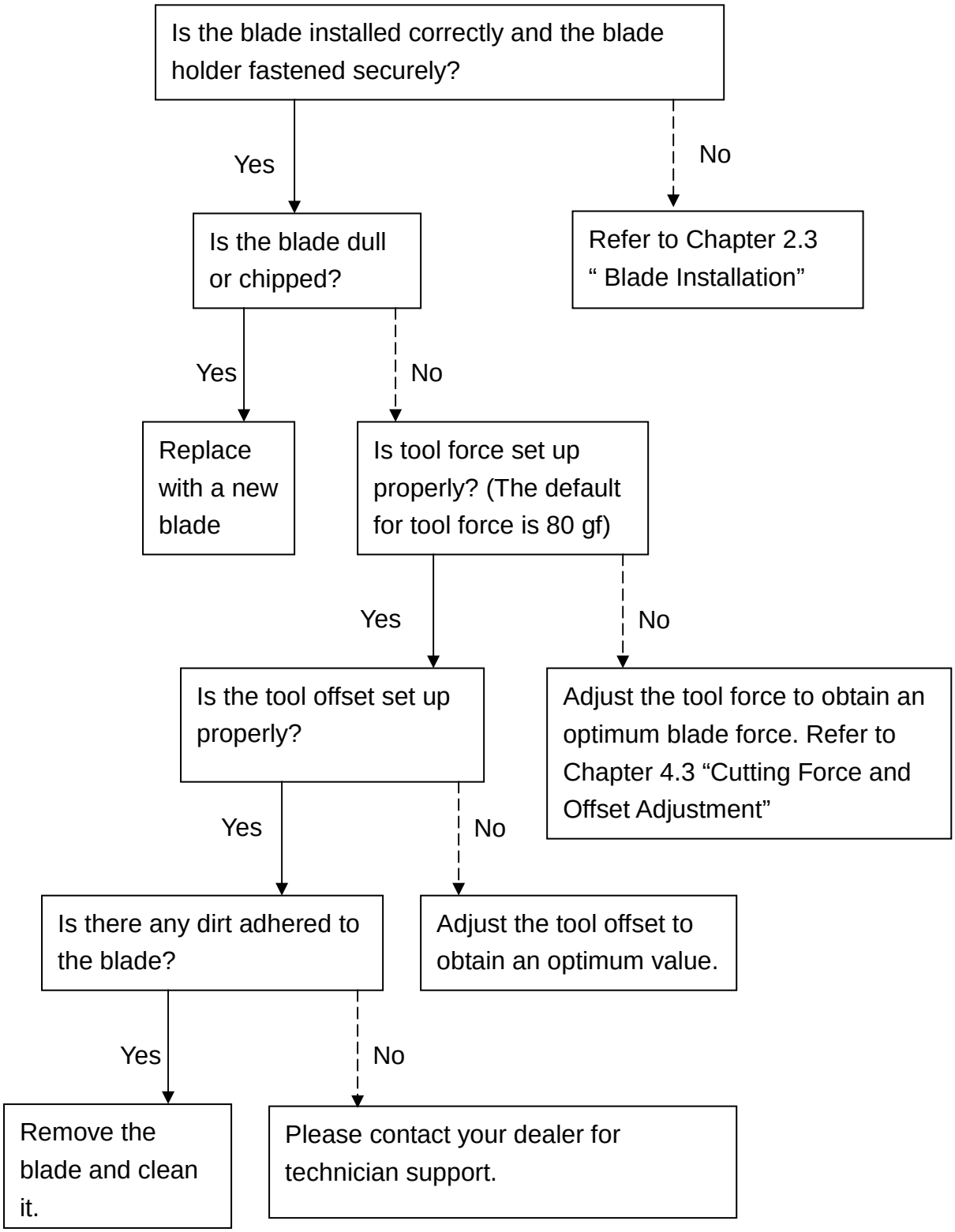
This message indicates that there might be a problem on the **X-axis**.
Please check that the drums are working normally and see that the media is well loaded. Then turn on the power and reboot the cutting plotter.

Error 4 Check the media, or Y motor (carriage driven motor)

This message indicates that there might be an obstruction to the carriage relating to a problem on the **Y-axis**.
Please clear the obstruction and check that the carriage can move smoothly. Then turn on the power and reboot the cutting plotter.

5.3 Cutting Quality Problems

Note: The daily maintenance of your cutting plotter is very important. Be sure to clean up the grid drum and pinch rollers regularly for better cutting accuracy and output quality.


Is the blade installed correctly and the blade holder fastened securely?
Yes
No
Is the blade dull or chipped?
Refer to Chapter 2.3 “ Blade Installation”
Yes
No
Replace with a new blade
Is tool force set up properly? (The default for tool force is 80 gf)
Yes
No
Is the tool offset set up properly?
Adjust the tool force to obtain an optimum blade force. Refer to Chapter 4.3 “Cutting Force and Offset Adjustment”
Yes
No
Is there any dirt adhered to the blade?
Adjust the tool offset to obtain an optimum value.
Yes
No
Remove the blade and clean it.
Please contact your dealer for technician support.

Expert 52 Specification

Model		EX-52
Max. Cutting Width		1320mm(51.96in)
Max. Media Width		1470mm(57.87in)
Material Thickness		0.8mm
Max. Cutting Force		250g
Max. Cutting Speed(Diagonal)		400 mm /sec (15.7"/sec)
Mechanical Resolution		0.012 mm
Software Resolution		0.025 mm
Distance Accuracy		±0.254 mm or ±0.1% of move, whichever is greater
Repeatability		±0.1mm
Re-plot Memory		500 Kbyte
Interfaces		USB 2.0 (Full Speed) & RS-232
Commands		HPGL, HPGL/2
Configurable Origin		Yes
Control Panel		6 LEDs/10 Keys
Stand		Standard
Operation Environment	Temperature	15℃~30℃ / 60℉~86℉
	Humidity	25% ~ 75%

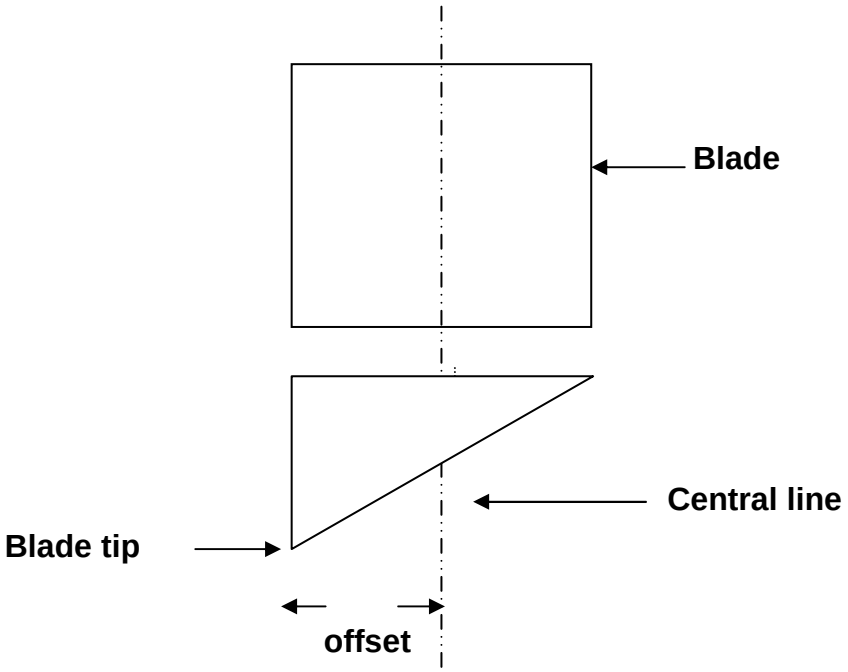
- Compatible with Windows 2000/ XP/ Vista/ 7/ 8 and MAC OS X 10.4-10.7.
- The specification and data sheet may vary with different materials used. In order to obtain the best output quality, please maintain the machine regularly and properly.
- GCC reserves the right to change the specifications at any time without notice
- The above listed specification values are effective only when operated with media certified by GCC.

Blade Specification

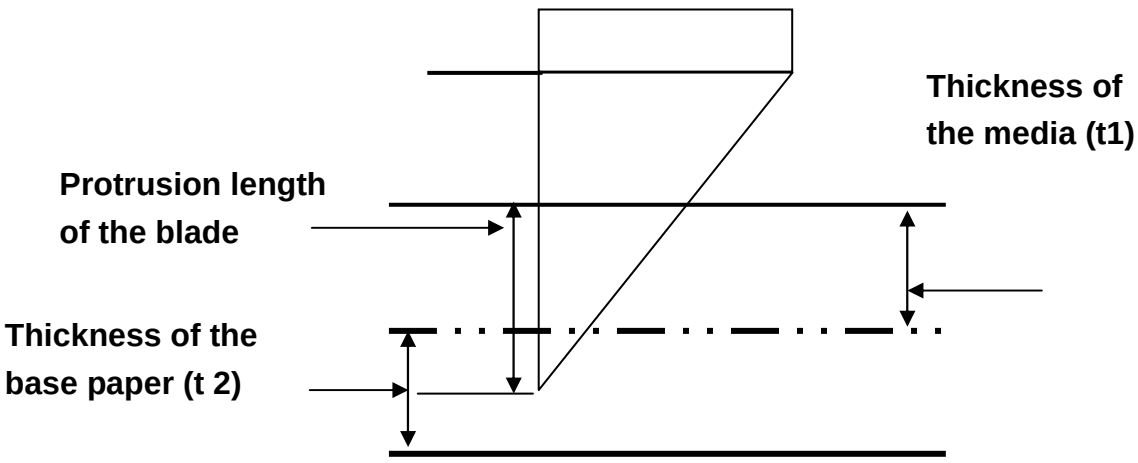
20200159G	For cutting thick fluorescent and reflective vinyl. Also for cutting detailed work in standard vinyl.
	The blade is 45°with **Red Cap**(5-unit package), 0.25 mm offset
265012020G	For cutting reflective vinyl, cardboard, sandblast, flock, and stencil sharp edge.
	The blade is 60°with **Green Cap**, 0.50 mm blade offset
26500059G	For cutting thin sandblast mask and stencil with friction feed or sprocket feed machine.
	The blade is 60°with **Blue Cap**, 0.25 mm blade offset
26500060G	For Cutting small text and fine detail. Sharp blade with smallest offset.
	The blade is 0.175 mm blade offset with **Black Cap**
265012840G	For thin and delicate media such as window tint.
	The blade is 25°with **Yellow Cap**, 0.25 mm blade offset

About the Tool

A generic term referring to the blade that cuts the sheet, the pen that does plotting, and the LED bombsight (option) used for pointing to the reference point.
OFFSET is the distance that the blade tip is displaced from the centerline of the blade.



Protrusion Length of the Blade



Length of protrusion = t1 + t 2/ 2, but for your convenience you may just make it about 0.3mm ~ 0.5mm beyond the blade holder tip.

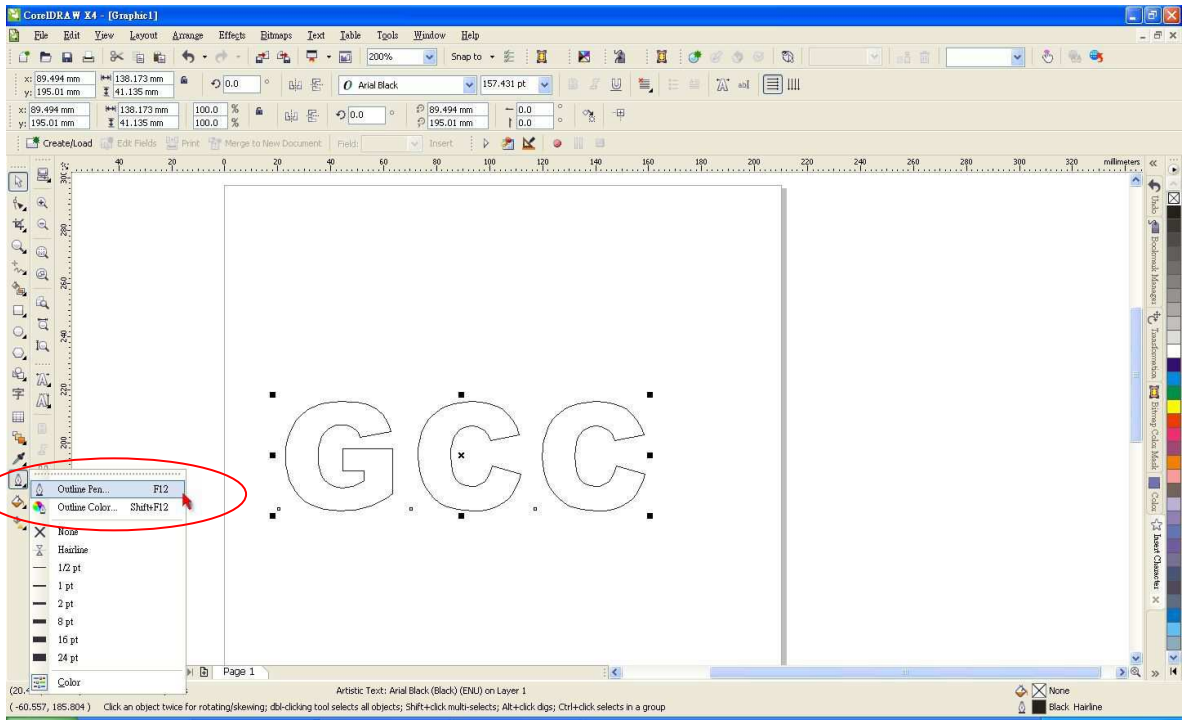
CorelDRAW Output Instruction

The following is an example of how to output the file with CorelDRAW.

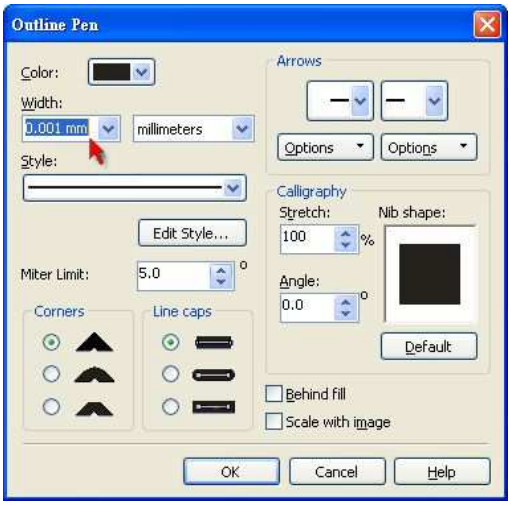
User Instructions

1. Open CorelDRAW, finish editing all the files you wish to plot and select all the images at once.

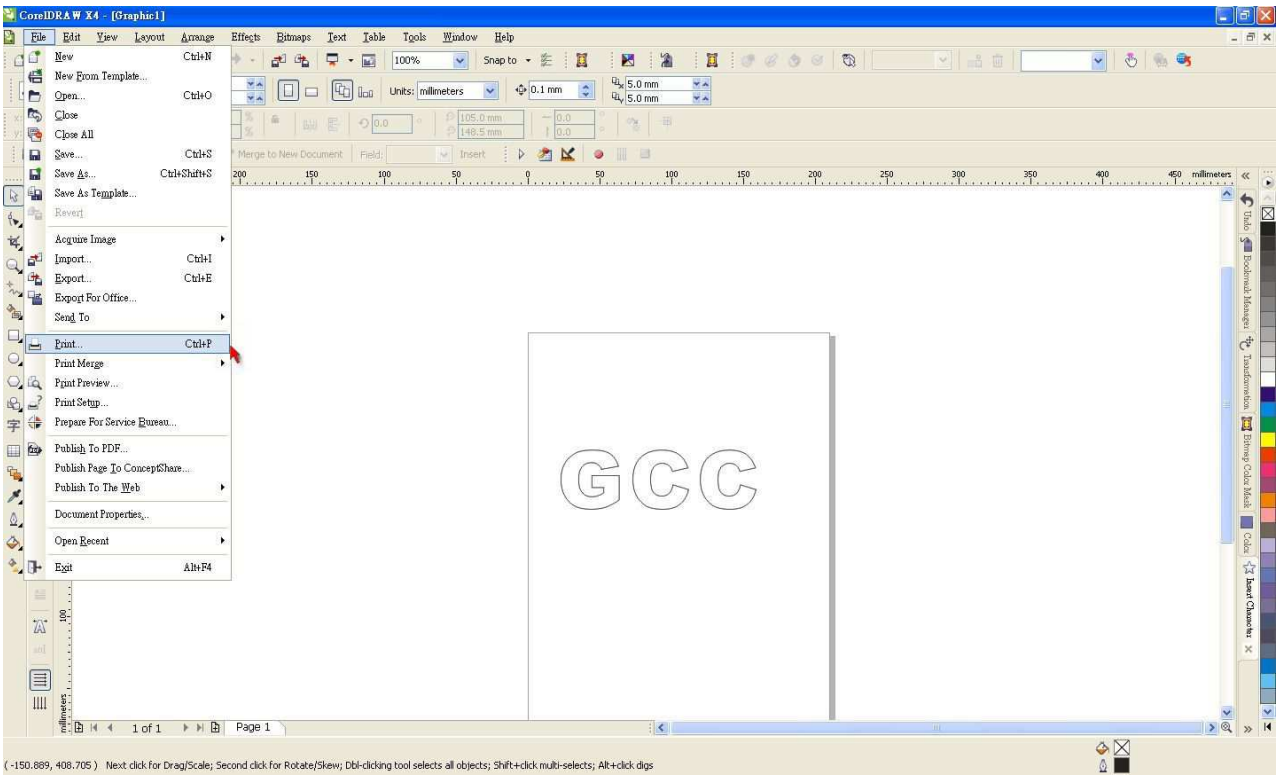
2. Select “Outline Pen” to adjust the outline for cutting.



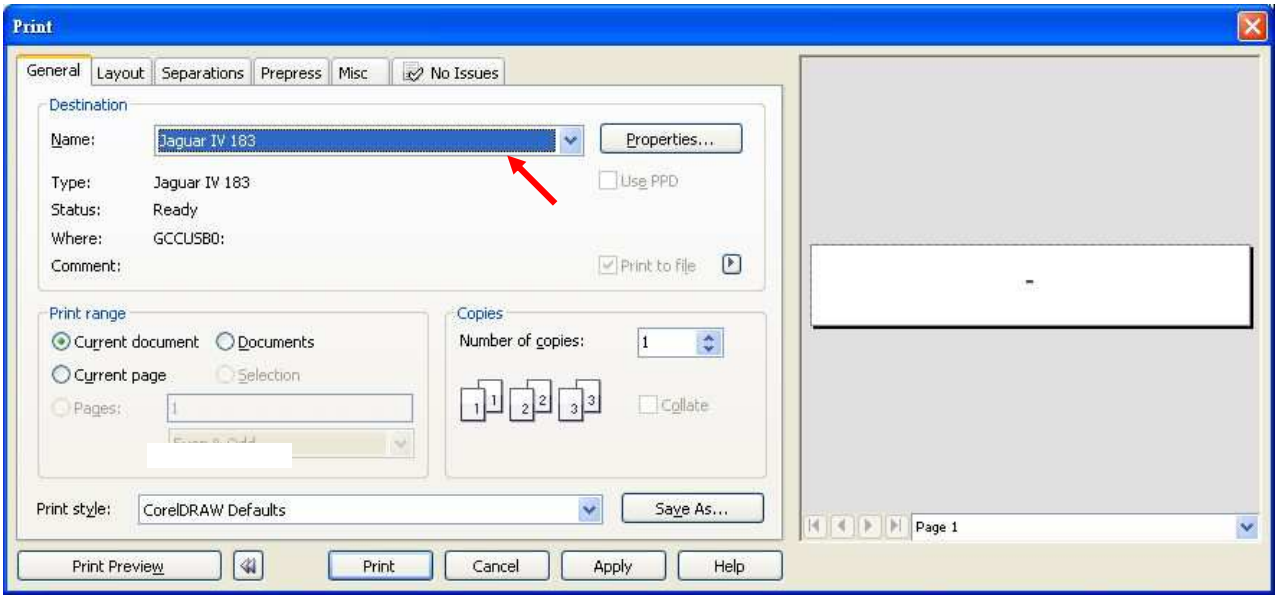
3. Adjust the value of pen width to 0.001 mm and click “OK” to save your input.



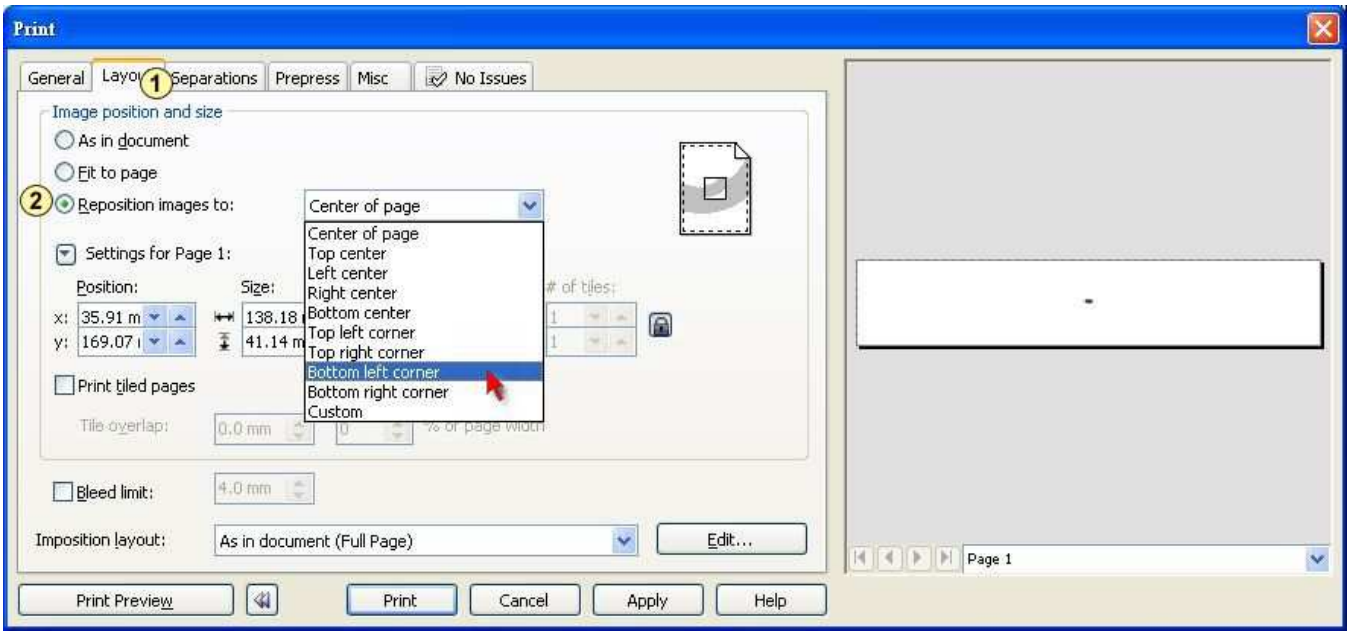
4. Select “ File → Print” to output the file to your cutters.



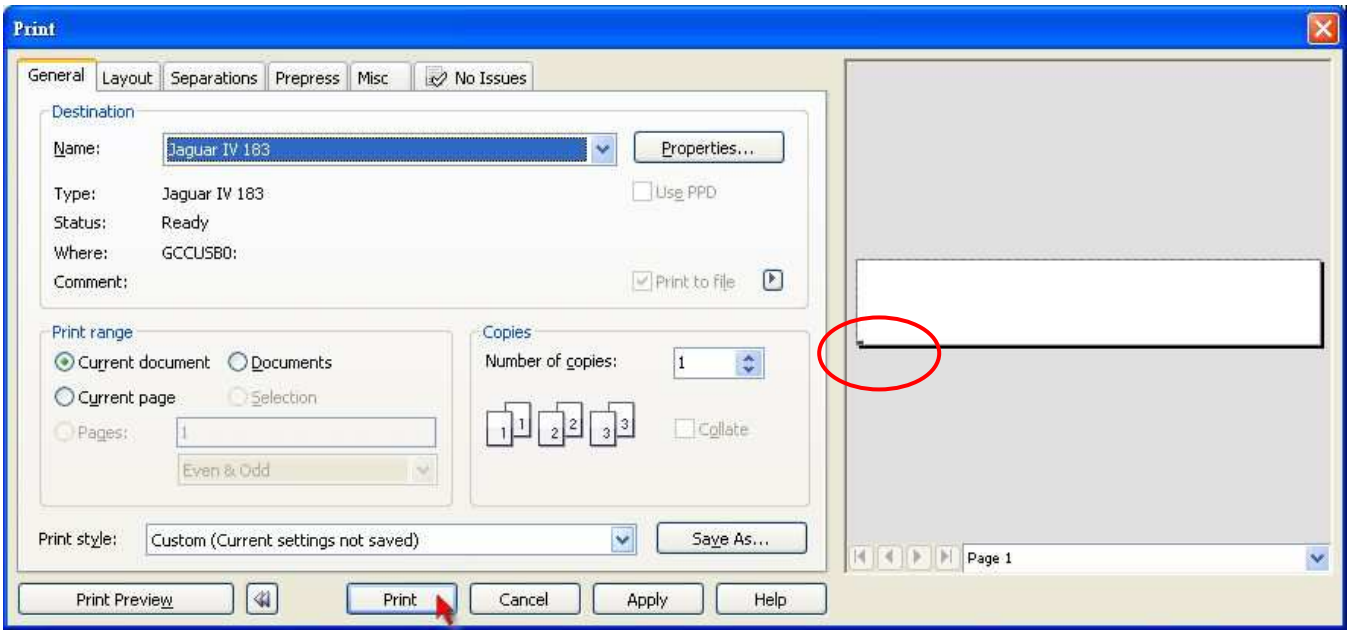
5. Choose the correct model you have installed.



6. Choose the “Layout page” and click the “Reposition images to: → Bottom left corner”.
Please note that you must put your image at the bottom left corner.



7. Go back to the General page and check that your image is at the bottom left corner. Click “Print” and get a wonderful cutting image.



DirectCut Instruction

DirectCut Mac AI Plug-in is compatible with MAC OS X 10.4-10.7 (operated with Adobe Illustrator CS2-CS5).

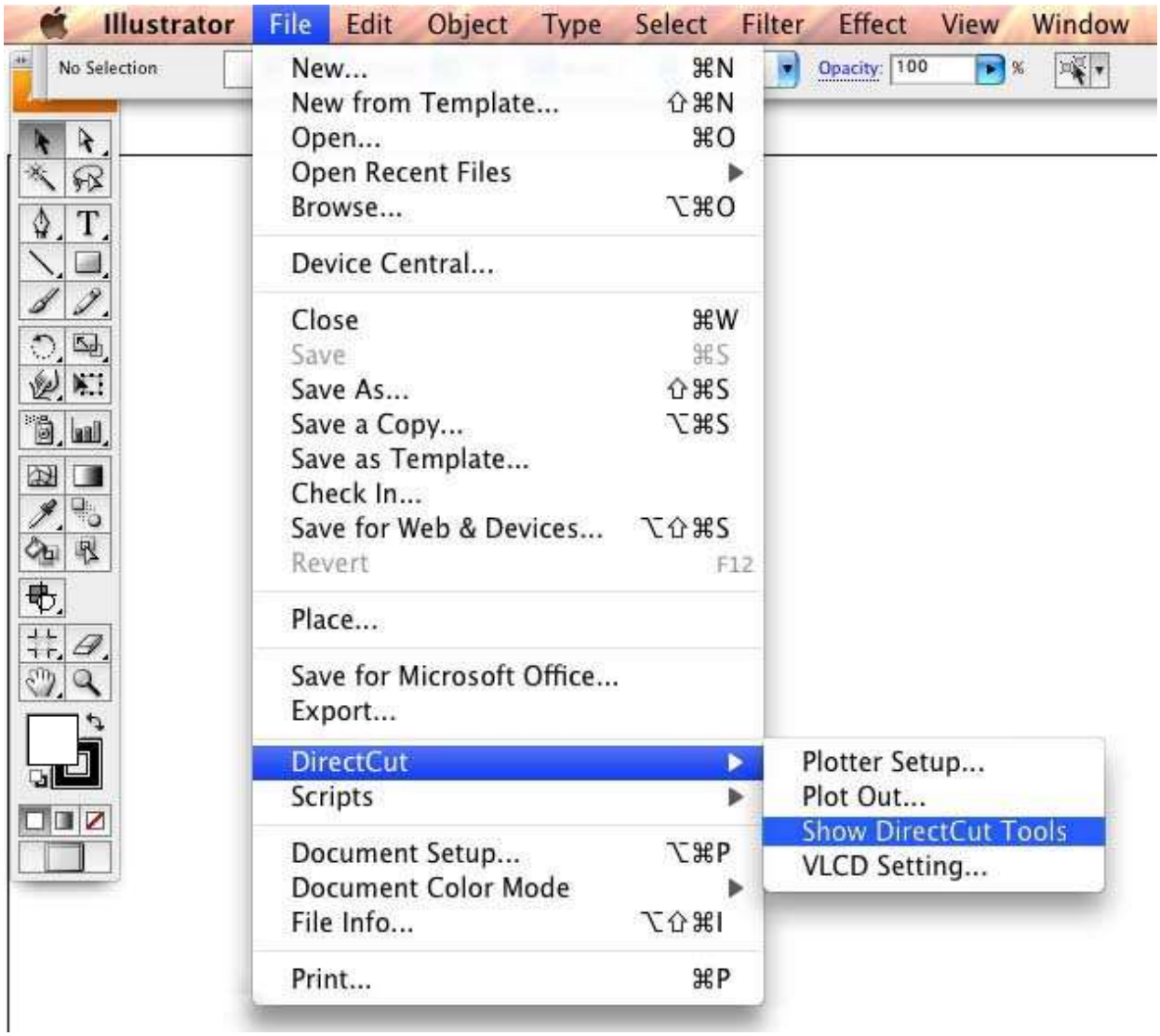
If you want to use Adobe Illustrator CS6 on your MAC, you may need Parallels Desktop software, Window OS and Windows based Adobe Illustrator CS6 to install Windows OS in your MAC computer and run Windows based software under MAC computer.

User Instructions

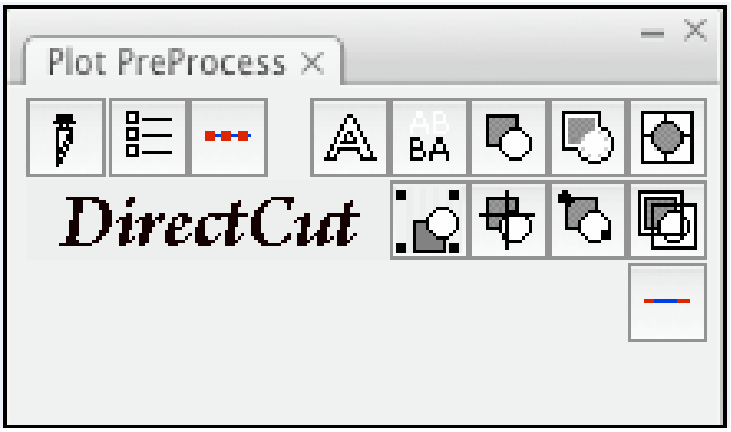
Follow the simple steps below to complete your output settings:

Step 1. Run DirectCut

1) Go to File and select “Show DirectCut Tools” under “DirectCut”



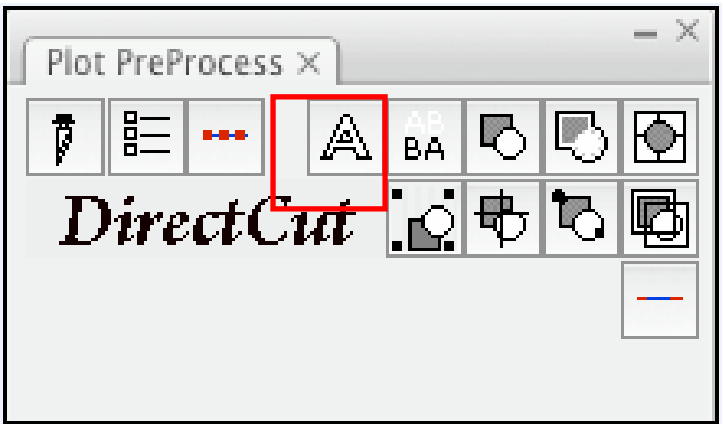
You will be presented with this dialog below:



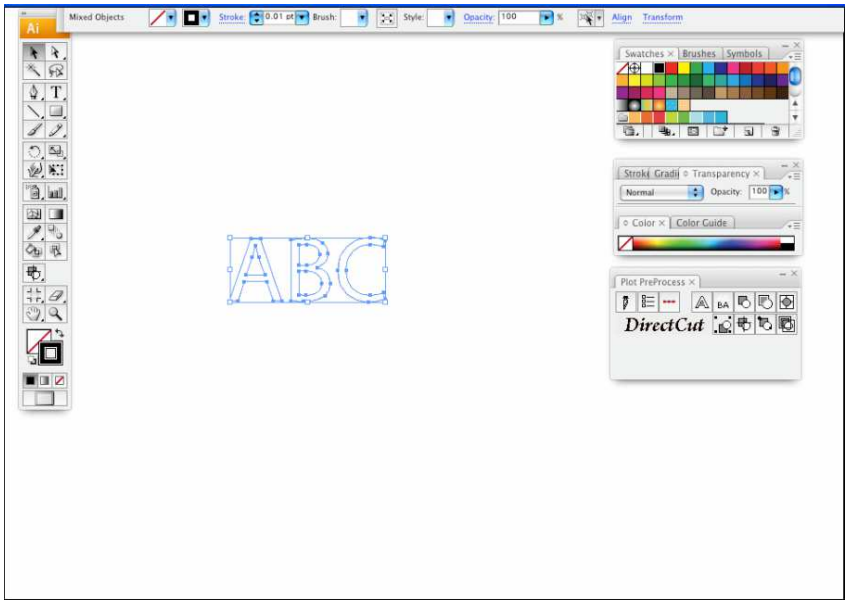
Step 2. Create/ import your image/ file.

For texts

1) Enter your texts in Adobe Illustrator, select the letters and click [Text outline] to outline the letters.



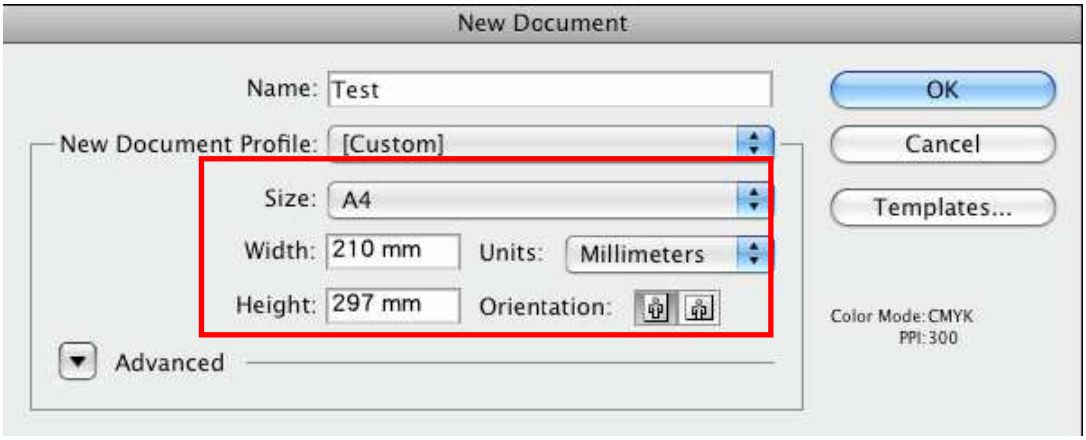
A contour line will be created for your image.



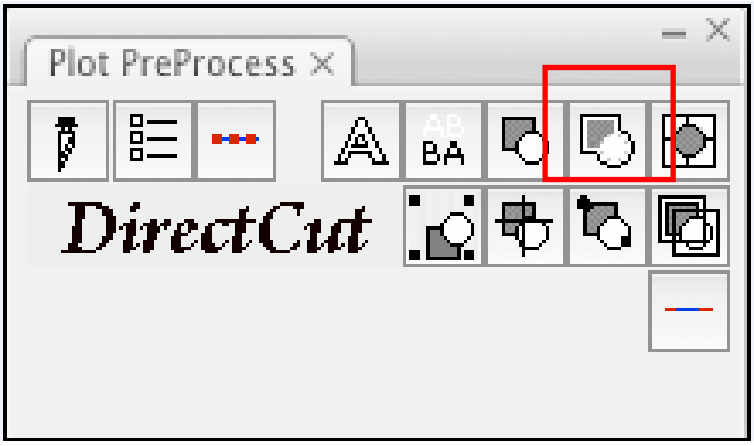
Note: The line width must be set as 0.001 mm

For Images

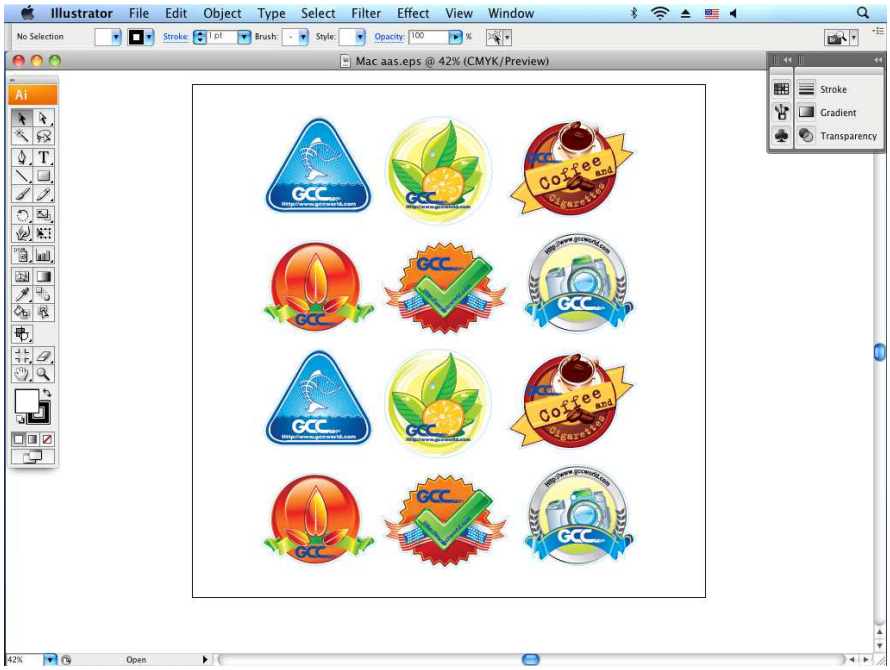
1) Open a new image on Illustrator and decide the size of your material.



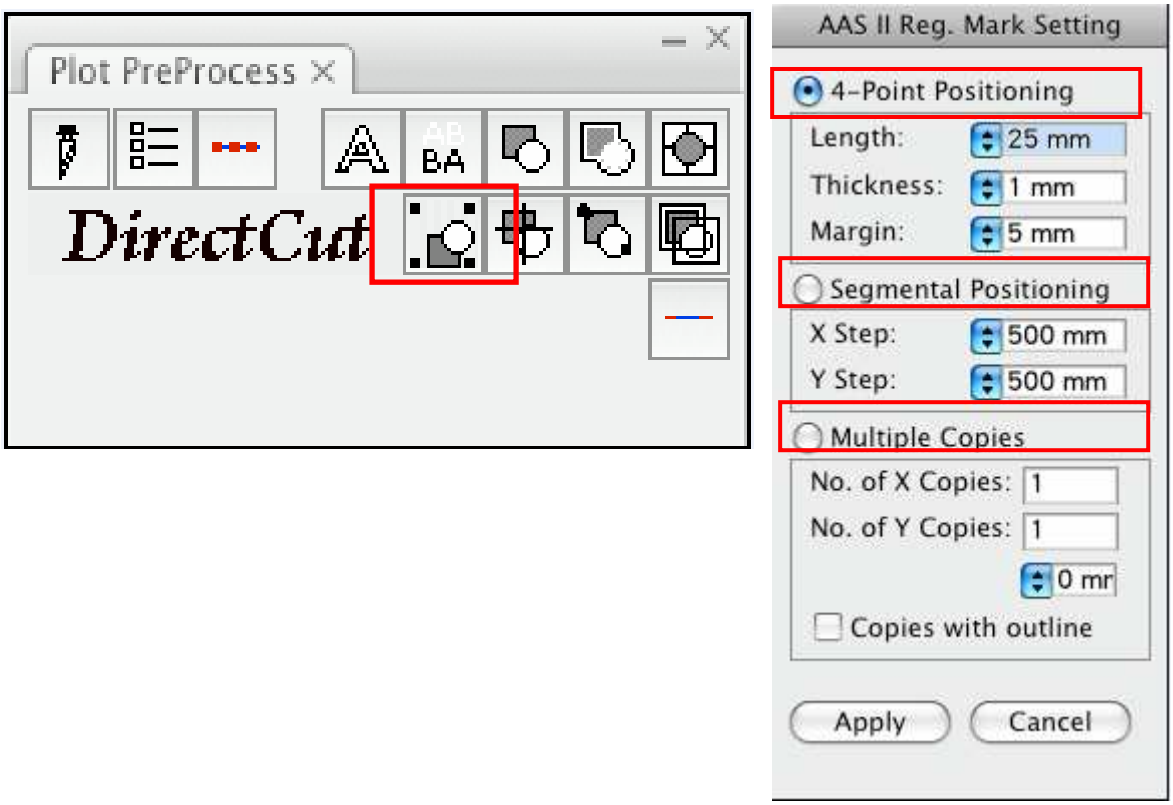
2) Select the image and click [Make outline and offset] to create outlines of graphics.



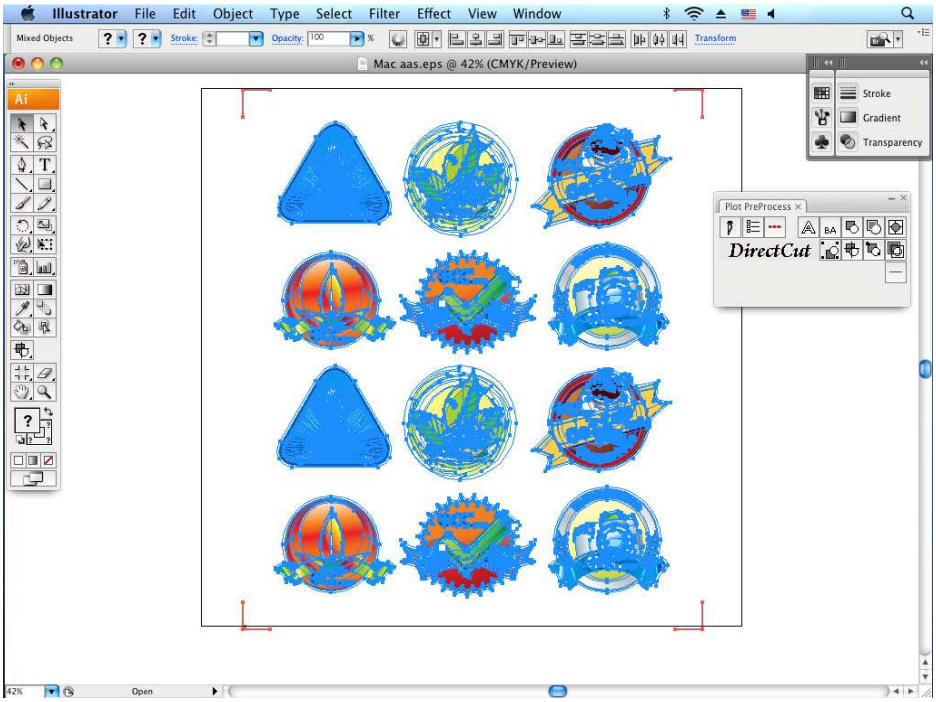
Outlines will be created for your image.



3) Click on the image and apply the AAS function by clicking the [Add registration marks] command and select the registration marks needed.

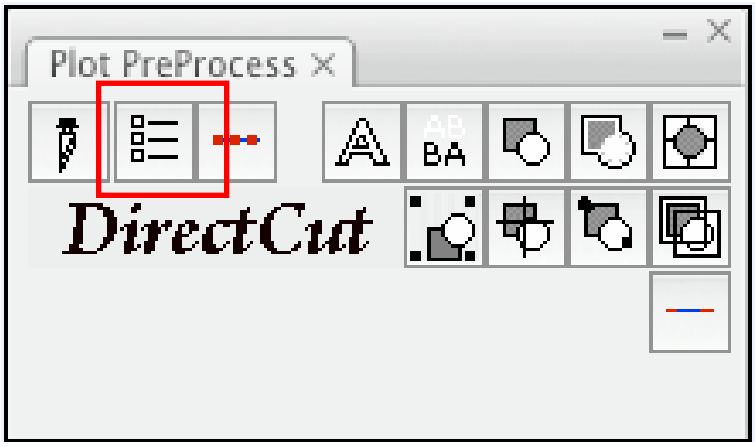


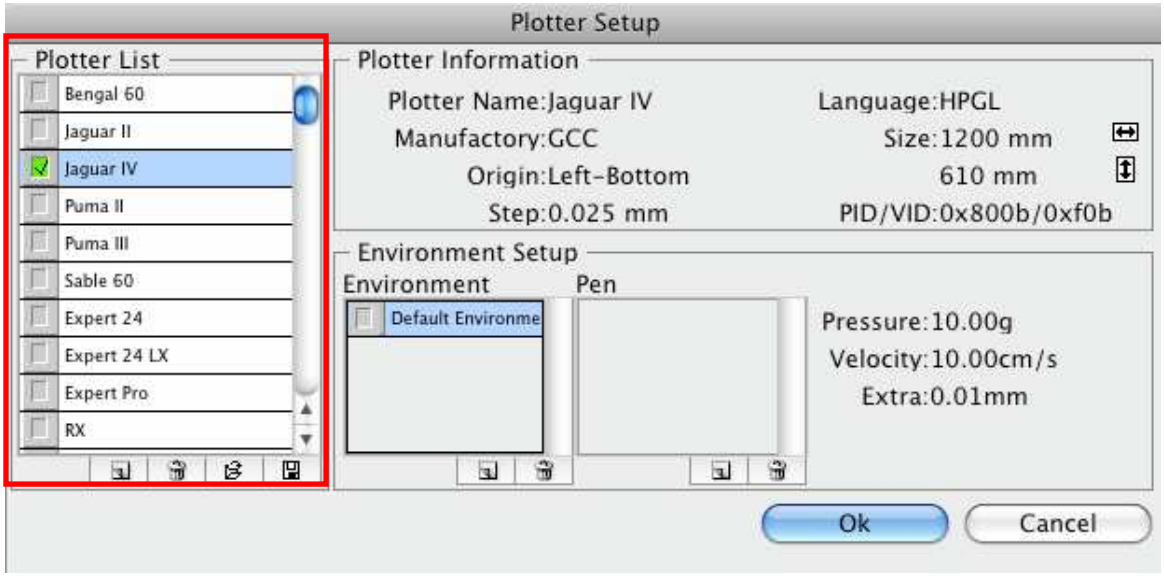
The registration marks will be created as below.


Illustrator File Edit Object Type Select Filter Effect View Window
Mac aas.eps @ 42% (CMYK/Preview)
Plot PrePocess
DirectCut

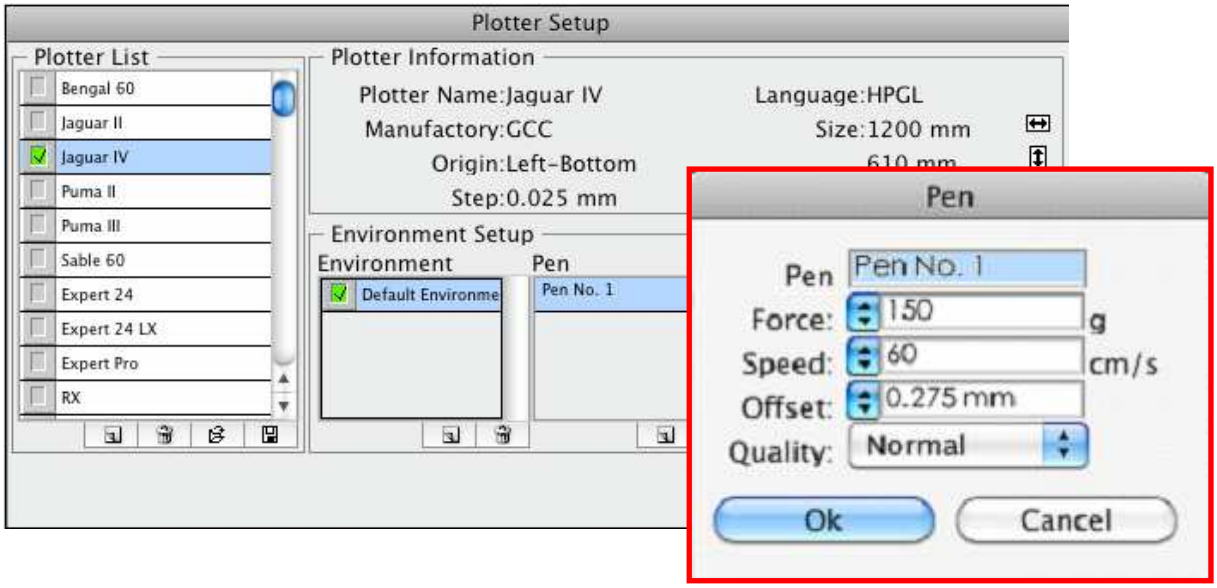
Step 3. Output

1) Click on [Plotter Setup] and select the correct model in [Plotter List].

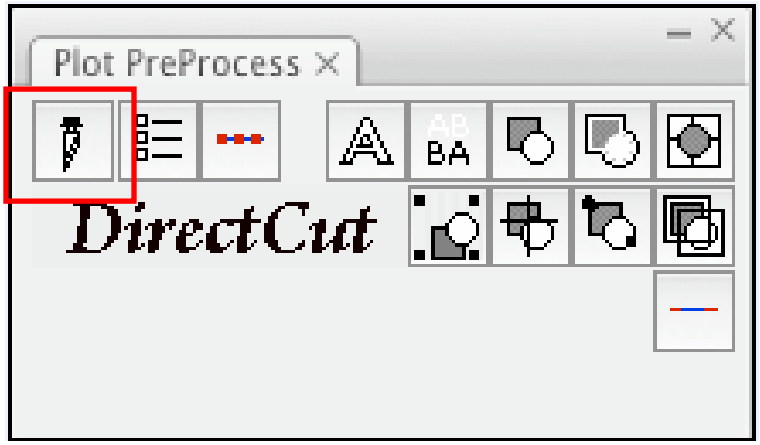




2) Tick Default Environment to create Pen No.1 in the Pen section. Double click Pen No.1 and complete your parameter settings.



3) Select the entire object and click [Plotter Output].



4) Output the object by clicking [Export] and GCC Cutting Plotter will start cutting the image.